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ABSTRACT

The Tennessee Nutrition Education and Training (NET) program is part of a U.S. Department of Agriculture effort to develop a coordinated nutrition education program for children from preschool through grade 12. In its first year of operation, the Tennessee NET program conducted summer nutrition education workshops for elementary teachers and school food service managers, distributed nutrition education materials, and funded nine pilot nutrition education projects throughout the state. Evaluators at the University of Tennessee (1) used pre- and posttests of nutrition knowledge as well as attitudinal measures to assess the effectiveness of the 1979 summer workshops; (2) assessed usage rates, quality, and developmental appropriateness of materials distributed; (3) evaluated four of the pilot projects; and (4) designed K-12 assessment instruments and used them in forty-eight schools throughout the state to collect baseline data on nutrition knowledge, attitudes, behavior, and perceptions of nutrition education from a sample of students, parents, teachers, principals, and food service personnel. No systematic differences between responses of students in treatment and comparison schools were detected in the initial testing. Personnel in one-half the elementary schools where baseline data were collected in spring 1980 were to receive training in NET workshops during summer 1980. In spring, 1981, data collected at the treatment schools were to be compared with that collected at untreated comparison schools to provide an assessment of the effectiveness of the 1980 NET-sponsored training in nutrition education. (Author/KC)

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EVALUATION OF THE TENNESSEE
NUTRITION EDUCATION AND TRAINING PROGRAM

1980

FINAL REPORT

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EVALUATION OF THE TENNESSEE NUTRITION EDUCATION AND TRAINING PROGRAM
1980

EXECUTIVE SUMMARY

The Tennessee NET Program and the Evaluation Design

The Tennessee Nutrition Education and Training (NET) Program is a component of a national effort to develop a coordinated nutrition education program for children from preschool through Grade 12. Funding is provided by the U.S. Department of Agriculture. Under the National School Lunch Act and Nutrition Amendments of 1977 states were authorized to carry out a nutrition information and education program to provide (1) training in nutrition for educators and food service personnel, (2) training in food service management for school food service personnel, and (3) nutrition education activities in schools and child care institutions. In its first year of operation the Tennessee NET Program

(1) provided training for food service workers in the principles and practices of menu planning, quantity food preparation, merchandising and service;

(2) acquired and distributed throughout the State nutrition education materials;

(3) funded nine pilot projects in nutrition education at sites located throughout Tennessee; and

(4) conducted a series of summer workshops in which teams composed of an elementary teacher and the food service manager in her/his school received training in nutrition education.

During 1979-80 a team of evaluators associated with the Bureau of Educational Research and Service at the University of Tennessee, Knoxville performed the following evaluation tasks:

(1) reviewed current nutrition education evaluation studies being conducted throughout the United States,

(2) formulated measurable program objectives based on needs assessment findings for the 1981 State NET Plan,

(3) evaluated the effectiveness of 1979 Summer NET workshops for teams of teachers and food service managers,

(4) assessed usage rates and quality and developmental appropriateness of print and nonprint nutrition education materials utilized by Tennessee NET staff,

(5) provided evaluative information on a sample (four of nine) of the pilot NET projects located throughout the State, and

(6) designed assessment instruments and used them to collect baseline data on nutrition knowledge, attitudes, and behavior and perceptions of nutrition education from a sample of Tennessee's public school students, parents, teachers, principals, and food service personnel.

A total of 48 schools participated in the baseline assessment phase. In each of Tennessee's nine development districts two elementary schools were designated as treatment schools, i.e., teachers and food service workers in those schools would receive training in nutrition education during Summer 1980; and two elementary schools were designated as comparison schools, i.e., no training in nutrition education would be provided for school personnel until Summer 1981. All secondary school assessment was carried out as a field trial since no summer workshops were planned for secondary personnel.

Baseline data gathered at treatment and comparison schools in Spring 1980 were to be compared with data collected at the same schools in Spring 1981 as part of an effort to assess the effectiveness of NET-sponsored training in nutrition education.

Evaluation Findings

1979 Nutrition Education Workshops

Data collected from the teacher-food service manager teams that participated in the Tennessee NET summer workshops in Summer 1979 indicated that in general the training program was viewed very positively:

(1) At each of the nine workshops participants posted a significant mean gain in knowledge of nutrition principles as measured by a test given before and after the presentation of workshop content.

(2) Workshop facilitators were given high marks (mean of 4.7 on a scale of 6) for their work in providing direction and support for workshop activities of participants.

(3) Participants indicated strong agreement with workshop purposes and the procedures designed to achieve them.

Follow-up of 1979 summer workshop participants during the 1979-80 school year provided additional evidence of the effectiveness of the training program:

(1) Virtually all (99%) of the participants had implemented the Back Home Action Plan (BHAP) developed during the workshop.

(2) According to project monitors (local school food service and curriculum supervisors), 98 percent of the BHAPs had been implemented successfully and 99 percent of the teacher-manager teams had functioned effectively.

(3) Parents of more than half of the students of the teacher members of workshop teams were involved in nutrition education activities during 1979-80.

(4) Summer workshop participants provided nutrition education for an estimated 29,700 persons in Tennessee during the school year following the series of workshops.

(5) Almost all (96%) of the workshop participants considered the teacher-food service manager team to be the most effective personnel combination for implementing nutrition education.

(6) Virtually all (99%) of the participants said they expected to use nutrition education during the 1980-81 school year.

When questioned during the school year following the summer workshop, participants identified the following workshop activities as the most helpful:

(1) writing the BHAP,

(2) reviewing nutrition education materials,

(3) learning nutrition principles, and

(4) sharing ideas and plans in teams.

Training in interpersonal skills was considered the least helpful workshop experience.

In sharing nutrition education with parents and school professionals, workshop participants considered tasting parties and materials displays to be their most effective techniques.

Assessment of Materials

Elementary teachers who received the NET newsletter produced by State staff expressed positive opinions about its contents. A nutrition consultant found the newsletter generally accurate, and useful for elementary teachers.

Nutrition education materials comprising the Goody Box, which was distributed to interested local school systems, generally provided accurate nutrition information. However, the reading level of some of the printed materials was high--Grade 12 and above. The filmstrips were the most used items in the Goody Box collection.

NET personnel were successful in publicizing various aspects of the project in newspapers throughout the State during 1979-80.

NET Pilot Projects

The evaluators designed a form for use in reviewing pilot nutrition education projects financed with NET funds. In subsequent years the form will be completed during a site visit. In June 1980 the evaluators used the form to record information obtained by telephone from project directors.

The four pilot projects reviewed were proceeding according to schedule, and appeared to be accomplishing the objectives specified in project proposals. Target groups had been reached, and most were satisfied with the training and materials they had received. Needs assessments and evaluation of outcomes had been conducted.

Spring 1980 Assessment - Baseline Phase

During 1979-80 a set of competencies in nutrition to be attained by students in Grades K-12 in Tennessee were developed by personnel at the University of Tennessee, Knoxville. The evaluation team was represented in the group of professors and students who spent four months identifying, then validating, the competencies. The same group then designed competency-based assessment instruments for students, their parents and teachers, school administrators and food service personnel. During April and May 1980 the evaluators sent field assistants to elementary and secondary schools in every development district in the State to administer the instruments, thus collecting baseline data on nutrition knowledge, attitudes, practices and behaviors, and perceptions concerning nutrition education from personnel in both treatment (staff to participate in nutrition education workshops in Summer 1980) and comparison (staff to receive no training in nutrition education prior to Summer 1981) schools.

No systematic differences between responses of students in treatment and comparison schools were observed as a result of the initial testing. Follow-up assessment at the same schools in April and May 1981 will produce scores for comparison with the baseline data collected in April and May 1980. The evaluators hypothesize that nutrition education concepts presented to school personnel in the Summer 1980 workshops will be transmitted to students in the treatment schools thereby causing those students to register greater gains than students in comparison schools when the assessment instruments are readministered in Spring 1981.

Students in Grades 2-12 were asked via the assessment instruments to indicate what changes, if any, they would like to make in their school lunch program. Elementary school students requested most frequently that a greater variety of foods (such as hamburgers, pizza, different vegetables, more fruit, ice cream and other desserts) and higher quality foods be served. Students in Grades 7-12 also expressed interest in increasing the variety and quality of food served, but placed a higher priority on changing procedures in the cafeteria: having more choices such as a salad bar, a choice of beverages including soft drinks, a voice in planning the school menu, faster service, lower prices, a cleaner and more pleasant cafeteria.

Observation of plate waste in treatment and comparison schools revealed that in Spring 1980 students were wasting from 11 percent (of their milk) to 40 percent (of their raw vegetables) of the food served them for lunch in their school cafeteria. Following milk, the most acceptable food groups were the main dish(19% wasted), fruit (21% wasted), and dessert (21% wasted). Vegetables were not as well accepted, with plate waste ranging from 29 percent for starchy vegetables to 40 percent for raw vegetables. Plate waste in Grades K-2 was especially high.

Responses of parents and school professionals to questions concerning their perceptions of nutrition education indicated that they were not satisfied with the level of their knowledge of nutrition and that they wanted to improve their knowledge. Neither student nor adult respondents were satisfied (more than half expressed dissatisfaction) with the quality of school food service programs in Tennessee, but many said they would like to have a part in improving those programs.

In summary, the baseline data collected in Spring 1980 suggested that the climate for moving forward in nutrition education in Tennessee was quite favorable. Representatives of the groups (students, parents, teachers, school administrators and food service personnel) designated as targets of Tennessee NET activities expressed interest in learning more about nutrition and in becoming involved in efforts to improve food service programs.

Recommendations

Workshops

Results of formative evaluation of 1979 summer workshops in nutrition education were transmitted during the year to the State NET staff so that they might adjust plans for Summer 1980 training workshops. The teacher-food service manager team appeared to be a good personnel combination to train, and the Back Home Action Plan seemed to be an effective mechanism for ensuring implementation of nutrition education in local schools. In addition to recommending that the teams continue to be the target of training and that the BHAP be developed again, the evaluators also suggested that more training time be spent in the workshops on (1) writing the BHAP, (2) reviewing nutrition education materials, (3) learning principles of nutrition, and (4) sharing ideas and plans among participants. This time could be gained by reducing that spent on developing interpersonal skills--considered by participants to be the least helpful workshop experience.

Since tasting parties and presentation of materials were considered the most effective techniques for sharing nutrition education with parents and other school professionals, future workshop participants should receive instruction and share ideas concerning these techniques.

Materials

The NET newsletter was considered a useful means of transmitting information to elementary teachers. A similar publication should be developed for teachers in Grades 7-12. More of each issue should be devoted to instructional activities for teachers to utilize in teaching nutrition. Each issue should be delivered in time for teachers to use the activities suggested for special dates or holidays.

The evaluators have recommended that State Media Center personnel use a reporting procedure that yields information about the number of students reached each time a set of materials is checked out by the supervisors who have access to the Media Center collection. Reasons for under-utilization of certain materials should be identified and acted upon.

One of the most popular items in the Goody Box, the _Nutrition for Children_ filmstrips, received an unfavorable review from the nutrition consultant engaged by the evaluators to assess the accuracy and developmental appropriateness of nutrition content in Goody Box materials. Serious consideration should be given to replacing _Nutrition for Children_ with a comparable filmstrip series of higher quality.

Goody Box contact persons should do more to promote use of materials in the collection. More than one Goody Box should be provided for systems where usage is great. Additional copies of heavily used materials should be obtained. Since films and filmstrips were the most popular items, the number and variety of materials in this medium should be increased.

Goody Box contact persons should be encouraged to separate materials by grade level and lend them on that basis rather than sending the entire collection to a school when that school requests materials.

Since the reading level of print materials in the Goody Box was found to be quite high due to the use of a special technical vocabulary (including such words as nutritional, stamina, dietary and nutrient), it is recommended that teachers be cautioned to work carefully with the students to develop the required technical vocabulary before using the materials.

To increase the accuracy of press coverage of NET activities, and to assist local nutrition educators in preparing suitable publicity for their own programs, the State NET staff should develop at least one press release which describes the overall NET purpose and program. If possible, quarterly or monthly articles should be prepared to publicize particularly interesting or effective activities.

Pilot Projects

From the telephone contacts and one site visit which the evaluators were able to conduct, they received the impression that most of the pilot projects were proceeding according to schedule and accomplishing the objectives specified in project proposals. The only problems identified were predictable ones: staff turnover, delays in delivery of purchased equipment, and the perceptions of project directors that they were not having as great an impact on the target audience as they would like.

During 1980-81 the evaluators plan to visit each pilot project site and it is anticipated that this additional contact will produce specific recommendations concerning pilot project operations.

Statewide Assessment

Data collected in the public schools in Spring 1980 provided evidence that a favorable climate for promoting NET goals existed in Tennessee at that time. Every effort should be made to capitalize on the motivation to learn more about nutrition which was manifest in the responses of students, parents, and educators. Conferences, PTA programs, workshops and formal course work should be planned for students and adults. These individuals also should be given opportunities to take active roles in efforts to improve school food service programs. Youth and adult participation on food service advisory councils should be encouraged.

Generalizations about the level of student knowledge of nutrition concepts should await the influence of a year of experience with training based on Tennessee's nutrition competencies. In the interim, data from plate waste observations made in Spring 1980 suggest that (1) a decrease in plate waste might be achieved by reducing the portions of food served to students in Grades K-2, and (2) emphasis in nutrition education should be placed on the merits of eating vegetables, especially raw vegetables.

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CHAPTER ONE

EVALUATION OF THE TENNESSEE NUTRITION EDUCATION AND TRAINING PROGRAM

Introduction

Background of NET in Tennessee

The Tennessee NET (Nutrition Education and Training) Program is a component of a national effort to develop a coordinated nutrition education program for children from preschool through Grade 12. This effort receives federal funding through the United States Department of Agriculture. The origins of this program can be traced to Public Law 95-166, the National School Lunch Act and Nutrition Amendments of 1977, which provided under Section 19, "Nutrition Education and Training." This legislation authorized funding to carry out a nutrition information and education program through a system of grants to state agencies to provide for (a) the nutritional training of educational and food service personnel, (b) the food service management training of school food service personnel, and (c) the conduct of nutrition education activities in schools and child care institutions.

Under this act each state was responsible for developing its own nutrition education and training program. NET programs were to be formulated in conjunction with findings from statewide needs assessments. In Tennessee a comprehensive assessment of nutritional status was conducted in Spring 1978. The data collected from an examination of existing Tennessee nutrition studies as well as oral and written communications with public school teachers, principals, supervisors of instruction, and food service personnel demonstrated the need for a coordinated statewide effort in nutrition education.

In August 1979 Tennessee's State NET Advisory Council (Tennessee Department of Education) gave priority to seeking solutions for the following problems which had been identified in the 1978 needs assessment:

1. Lack of motivation to put nutrition principles into practice.

2. Poor food habits.

3. Lack of knowledge of nutrition principles.

The NET Advisory Council recommended that the initial thrust of NET activities in Tennessee be directed toward teachers and food service personnel in elementary schools since this approach offered the possibilities of (1) reaching large numbers of individuals readily, and (2) changing food habits at the time these habits were being formed. The Advisory Council also recommended using a team approach--primarily teams composed of a teacher and a school food service manager--to build support and provide reinforcement for nutrition education in schools in Tennessee.

Tennessee NET Goal and Subgoals for 1980

The State NET Advisory Council and the State NET Coordinator developed the following overall goal and supporting subgoals (Tennessee Department of Education, pp. 1-2) to direct Tennessee's NET Program in 1980:

Primary Goal - To assist Tennessee children to understand the relationship of food, nutrition, and total health; and to put that knowledge into practice.

Subgoals:

1. To achieve school, home, and community support for a cooperative, coordinated nutrition education program.

2. To develop, assemble, and disseminate teaching strategies in nutrition education for a sequential program.

3. To provide teachers with accurate and current information about nutrition and human health factors affecting food availability and acceptability.

4. To increase the quality and eye appeal of meals by training food service workers in the principles and practices of menu planning, quantity food preparation, merchandising and service.

5. To improve the quality of food served, maintain sanitation standards and encourage good eating habits of children in child care centers and in family day care homes throughout the State.

Tennessee NET Evaluation Design for 1980

In October 1979 the Tennessee Department of Education contracted with the Bureau of Educational Research and Service at the University of Tennessee, Knoxville to obtain an evaluation of the 1980 Tennessee NET Program. The evaluation period extended from October 1, 1979 to June 30, 1980.

At the outset the evaluation team specified that the evaluation would provide evidence of the achievement of Subgoals 1, 2, and 3 as stated above. Subgoal 4 was accomplished as a part of the Tennessee School Food Service Plan; no NET funds were expended in this connection. The contract for developing the program designed to accomplish Subgoal 5 did not take effect until late Summer 1980.

The program evaluation conducted by personnel in the Bureau of Educational Research and Service included both formative and summative components.

Formative Evaluation Activities

In order to provide a continuous flow of management information to the State NET Coordinator concerning program operation, the evaluators conducted a literature review, formulated measurable program objectives for 1981, assessed the effectiveness of the 1979 summer training workshops for teams of teachers and food service managers, and assessed the usage rates and the quality and appropriateness of print and nonprint nutrition education materials utilized by Tennessee NET staff.

Review of literature. In the early months of the evaluation, current literature in the field of nutrition education, including evaluation of nutrition education projects, was reviewed in order to provide an information base for the evaluation. Theoretical and empirical studies were reviewed to suggest evaluation methodologies and instrumentation. Throughout the months of the evaluation, contact was maintained with current projects such as the National NET Evaluation conducted by Abt Associates in order to capitalize on innovations in methodology and instrumentation that might be introduced. A brief summary of the literature which was reviewed is included in Chapter Two of this report.

Verification and formulation of objectives. The evaluators were not able to use the objectives stated in the 1980 Tennessee NET Plan as bases for the program evaluation because those objectives were exclusively process-oriented and the accompanying measures of achievement specified were unrealistic in many instances. An early formative evaluation activity consisted of comparing the 1980 NET objectives with the findings of the statewide needs assessments to date in order to assess the goodness of fit, i.e., to answer the question, "Were identified needs addressed by the 1980 objectives?" A paper was prepared for the State NET Coordinator (see Appendix A) which suggested modifications that would (1) improve the congruence between objectives and identified needs, and (2) render the objectives measurable in realistic terms.

During Spring 1980, when the Coordinator was writing the 1981 Tennessee NET Plan, the evaluators met with her twice to discuss the substance and form of the 1981 objectives. Subsequently the evaluators took the Coordinator's ideas and fashioned a set of measurable objectives that could be evaluated in 1981. These objectives were utilized in the 1981 State NET Plan.

Evaluation of 1979 NET Summer Workshops (NETSW). During Summer 1979 Tennessee NET staff conducted nine regional workshops throughout the State, one in each of Tennessee's nine development districts. The five-day workshops were designed to train inservice teams, each of which consisted of an elementary public school teacher and the food service manager in her/his school. Approximately 60 percent of the workshop content consisted of training in group dynamics and interpersonal skills because workshop planners (Five State Nutrition Education Project-1975-provided the curriculum for the workshops) believed the teacher and food service manager needed assistance in learning to work together as a team. Forty percent of the workshop content consisted of training in nutrition and curriculum planning for nutrition education.

Five sets of data were collected during the 1979 NET Summer

Workshops: (1) participants' backgrounds in nutrition, (2) pre- and post-workshop scores on a test of nutrition content, (3) an assessment of the effectiveness of workshop facilitators, (4) participants' reactions to the workshop as measured by the instrument "Overall Workshop Reaction," and (5) participants' reactions to the workshop as measured by the instrument "Reaction to Overall Project." The evaluators analyzed these data sets and interpreted the results in Chapter Three of this report.

During the school year 1979-80 teams participating in NETSW implemented in their schools "Back Home Action Plans" (BHAPs) developed during the summer workshops. The implementation process was monitored periodically by a system level food service or curriculum supervisor who had attended a NET "Introductory Conference" in Spring 1979. The evaluators designed an instrument entitled "Nutrition Education Team Project: On-Site Evaluation" (see Appendix B) which was mailed to the monitors designated for each NETSW-trained team. Analysis of the On-Site Evaluation, which appears in Chapter Four, provided information for process evaluation of the project monitoring system.

In addition to the local monitoring system, a statewide follow-up effort staffed by NETSW facilitators was implemented to provide additional support for NETSW-trained teams. Two Follow-up Sessions, one in mid-Fall 1979 and one during Spring 1980, were conducted for team members in the city where their summer workshop had been held. At these sessions NETSW facilitators asked each team to report on the BHAP activities they had carried out at their school. Ideas were shared and problems were discussed. The evaluators attended several of the Follow-up Sessions and collected written information from participants to provide process evaluation for use by NETSW facilitators and the State NET Coordinator as they planned the 1980 NET Summer Workshops. A summary of this portion of the evaluation is included in Chapter Four.

The teacher-food service manager teams that participated in 1979 NETSW were asked to share the knowledge gained in the summer workshops with other teachers, administrators, students, and parents associated with their home schools. Most of the teams held "Sharing Sessions" for large groups in order to disseminate information about nutrition education. Chapter Four also includes evaluative data on NETSW participants' Sharing Sessions.

Usage rates, quality and appropriateness of print and non-print materials. During the first years of the Tennessee NET Program acquisition of current nutrition education materials was given high priority. During 1980 the evaluators surveyed contact persons at both local and State education agencies that were serving as repositories for these materials in order to obtain information about how often and with what success the materials were being used. Several reports on materials usage and user satisfaction appear in Chapter Five of this report.

Chapter Five also contains an assessment of media coverage of Tennessee NET activities.

Dr. Jean Skinner, Professor of Nutrition at the University of Tennessee, Knoxville, was engaged by the evaluators to examine the State NET newsletter and a significant proportion of the printed materials distributed by the NET staff and to assess the quality and appropriateness of these items. Dr. Skinner's appraisals are part of Chapter Five.

Finally, a reading specialist was hired to assess the readability for the intended audience of a sample of the State NET materials. Her work is included in Chapter Five.

Summative Evaluation Activities

In addition to the formative evaluation activities, which provided the State NET Coordinator with a continuous flow of information for improving program management, the evaluators also carried out a summative evaluation component designed to assess the quality of NET Program outcomes. Summative evaluation was focused in two areas: end-of-year assessment of a sample of local pilot projects conducted with State NET funds, and collection of baseline data on nutrition knowledge, attitudes and behavior and perceptions of nutrition education, of a statewide sample of Tennessee public school students, parents, teachers, principals, and food service personnel.

Assessment of local pilot projects. A technical assistance council assisted the State NET Coordinator in reviewing proposals for demonstration and training projects submitted by local education agencies throughout Tennessee and selected nine proposals for funding during 1979-80. A listing of these projects is included in Appendix C.

The evaluators visited the project located in Knoxville, "Reaching Teens with Nutrition Education," and contacted by telephone the directors of the projects in Putnam and Carroll counties and in Cleveland, Tennessee. Evaluation reports on these four pilot projects comprise Chapter Six of this report.

Statewide Nutrition Education Assessment - Baseline Phase. The ultimate criterion for assessing the effectiveness of Tennessee's NET Program is the impact of the program on nutrition knowledge, attitudes, and behavior of the State's children and youth. One cannot assess the impact of a program until that program has been defined in specific, measurable terms. Prior to 1980 the Tennessee NET Program had not been defined in terms of the specific knowledge, attitudes, and behaviors that should be promoted for students throughout the State. The curriculum presented in the Five State Nutrition Education Project (1975) was used to train Tennessee's public school personnel in 1979, but behavioral outcomes for students were not identified in that plan. Consequently, the evaluators were not able to assess in a meaningful way the effects of the 1979 NETSW training on the elementary school students whose teachers implemented Back Home Action Plans designed in the summer workshops.

By 1980 problems associated with the absence of statewide nutrition education objectives for students were evident to the Tennessee NET Coordinator. The 1980 State Plan specified that a new contract would be established to assemble/develop nutrition competencies for Tennessee students in grades K-12 and to conduct a set of training workshops for school professionals that would acquaint them with the competencies and with materials and teaching strategies that could be used to promote student mastery of the competencies.

The contract for development of student competencies in nutrition education was awarded to the Bureau of Educational Research and Service at the University of Tennessee, Knoxville. The evaluators and the competency project personnel thus were able to work closely to achieve the related goals of both projects. By Spring 1980 the K-12 competencies had been written, the associated training for school professionals had been planned, and two schools in each of Tennessee's nine development districts had been identified to participate in the training workshops to be held during Summer 1980 (see Appendix D).

The evaluators participated in developing and field testing paper-and-pencil instruments to measure student achievement of the nutrition competencies. Since the adults responsible for promoting student mastery of the competencies first needed to master the competencies themselves, companion instruments also were designed for teachers, principals, school food service workers, and parents.

During April and May 1980 the instruments designed by the University of Tennessee project personnel were administered to students and adults associated with four elementary schools (grades 7-12) in each of the nine development districts. This procedure furnished baseline data against which future progress toward mastery of the competencies might be compared.

Two of the elementary schools in each district were designated as "treatment" schools because they had been identified by competency project personnel as participants in the Summer 1980 Competency Training Workshops. Two of the elementary schools were designated as "comparison" schools because their personnel were to receive no training in nutrition education during 1980. (Personnel in comparison schools were promised training in workshops to be held in 1981.) Test scores for students and adults associated with treatment and comparison schools in Spring 1980 were to be compared with test scores on the same set of instruments administered in Spring 1981 to determine whether the training in nutrition offered in the Competency Training Workshops in Summer 1980 had been effective in promoting greater gains for treatment school personnel than for comparison school personnel.

No training was provided in 1980 for secondary school personnel, so there could be no designation of treatment or comparison schools. Thus the administration of assessment instruments in grades 7-12 constituted a field test of instruments at the secondary level.

Chapter Seven of this report contains baseline data on nutrition knowledge, attitudes and behavior and perceptions of nutrition education for students, parents, teachers, principals and food service personnel at two treatment and two comparison elementary schools and at one secondary school in each of Tennessee's nine development districts.

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CHAPTER TWO

REVIEW OF RELATED LITERATURE

Lynne Roberson

Evaluation is conducted to enable planners to determine the validity of program objectives and the effectiveness of implementation strategies. Evaluation begins and concludes the planning cycle, providing needs assessment data, feedback for project personnel concerning management processes, and outcome information by which to estimate the change that occurs as a result of intervention. In the area of nutrition education, the application of evaluation theory and research has begun only recently (Talmage, et al., 1978).

Needs Assessment

In describing their experience in preparing a needs assessment statement to apply for funding for the NET program in New York, Kumanyika and Russo (1979) stated that important information necessary for documentation was not available and that much of the information that was available could not be translated into program objectives and priorities. In planning the Tennessee NET program, the Department of Education and its State NET Advisory Council members faced an experience similar to that of the New York planners. A great deal of information was available on the nutritional problems of children as well as problems in the educational system that needed to be considered in educational planning. Some general problem areas were identified to justify program intervention, but the magnitude and severity of those problems were not quantifiable; i.e., the extent to which those problems existed in Tennessee was not known.

From a review of the literature and surveys conducted by the Tennessee Department of Education (1979), a number of health, dietary and educational problems were identified. Four nutrition-related health problems which appeared to be prevalent among school-age children in Tennessee included: (1) dental health problems; (2) growth problems related to under- and over-consumption of food; (3) problems with achieving an adequate nutritional state during adolescence, especially among pregnant teenagers; and (4) iron-deficiency anemia. Dietary and educational problems given top priority by the State NET Advisory Council included: (1) poor food habits; (2) lack of knowledge of nutrition principles; and (3) lack of motivation to apply nutrition principles. Problems in the educational system with implications for program development included the lack of an integrated, sequential curriculum in nutrition education and a shortage of qualified staff to conduct nutrition education and to prepare safe, good quality food in the cafeterias. These health, dietary, and educational problems became the focus of the intervention planned for the Tennessee NET Program.

Methods of Assessment and Evaluation

Habicht, et al (1978) stated that a nutritional assessment includes the measurement and description of the nutritional status of a population in relation to those economic, socio-demographic and physiologic variables that can affect the nutrition of that population. Variables include location, ethnicity and cultural experience, age, sex, the prevalence of various illnesses, pregnancy, growth and development, and other standard epidemiologic control variables. The methods employed in the nutritional assessment of population groups usually include an evaluation of the medical history, a clinical examination, a dental examination, anthropometric measurements, samples of blood and urine, and an estimate of dietary intake of food (Martin and Beal, 1977).

Research and program evaluation methodology occasionally includes the use of the dietary survey alone to determine food consumption practices. This approach does not provide the basis for inferences about the relationship of dietary intake to health and nutritional status. Dietary survey methods include the use of the record, the recall, and/or the inventory of food consumed over a period of time by household (Martin and Beal, 1977). The 24-hour recall of food intake and variations of this approach have been used in the evaluation of intervention programs for adults to determine the impact of educational intervention on behavior. The limitations of this method of data collection for assessing dietary practices have been reviewed (Gersovitz, et al., 1978).

The methodology used in nutritional assessment surveys may or may not be adaptable for use with children in the school setting. In an assessment survey one usually works with adults to determine child feeding practices over time in the context of family food consumption; however, the 24-hour recall of dietary intake has been used with children. Emmons and Hayes (1973) reported that the ability of the child to give accurate information on food intake depends on an adequately developed sense of time, a knowledge of the names of food, a sufficiently long attention span, a good memory, and a willingness to cooperate. The authors compared the evaluators' observations of school lunch program plate waste with recalls of food consumed by children in grades one through four. They found that recall improved with age, with children in grade one remembering an average of 60.5 percent of the foods; and children in grade four, an average of 80.6 percent. Some children omitted foods they had eaten; other children added items they had not eaten, often from school lunches eaten on other days near the time of the recall.

Emmons and Hayes (1973) also compared dietary recalls from children with recalled data provided by their mothers. There were more significant correlations between the nutrient levels from the children's recalls of lunch and the lunch actually eaten than between the nutrient levels calculated from the mothers' and the children's recalls. The authors concluded that the information provided by young children above second grade wasas accurate or more accurate than that provided by their mothers. None of the results would provide estimates of food consumed sufficiently accurate to permit estimation of the adequacy of a meal in relation to a standard used in menu planning.

Plate waste studies have been used as a tool in menu planning for school feeding programs to determine the nutritional adequacy of the meal consumed in relation to a standard for the meal and to determine the acceptability of the foods to the children (Emmons and Hayes, 1973; Guthrie, 1977; Head and Weeks, 1975, 1977; Jansen, et al., 1975; La Chance, 1976). Studies of change in attitudes and behavior using the methodology of plate waste studies have been limited to efforts in which the impact of nutrition education on the acceptance of selected foods (usually vegetables) was studied. This is a unifactorial approach to understanding the relationship of education to behavioral change. Such an approach does not provide perspective on the impact of education on total dietarypractices nor can one make inferences about the relationship of dietary intake to health and nutritional status.

It should be noted that efforts to achieve positive changes in food consumption in the school lunch program may be accompanied by altered levels of some nutrients in the diet which must be accompanied by changes in food consumption at other times during the day to provide an adequate diet. For example, Guthrie (1977) reported that when flavored milk was made available as an alternative to white milk for 400 children in grades one through six, there was an increased consumption of milk and a decreased consumption of other foods. As a result, the mean dietary intake of calcium and riboflavin increased and iron decreased for the children at the lunch meal. In addition, there was greater food waste and less waste of milk. Participation in the school lunch program did not change, but more children bought milk alone. This study demonstrates the impact of one change in the foods made available on the nutritional adequacy of the meal and the estimated consumption of food -- variables which can be studied by evaluating plate waste.

Tests of knowledge (pre- and post-tests or post-tests alone) and attitudinal surveys are the most widely used methods for educational evaluation. Though the correlation between knowledge and behavior has been shown to be low (Evans and Hall, 1978) it is believed that understanding helps those who wish to change behavior, and both teaching and testing continue to be based on this assumption (Dwyer, et al., 1970). The few available instruments which have been developed to assess the impact of nutrition education have not been adopted for use by groups that have established their own objectives and developed a related curriculum because test and questionnaire results have little meaning if taken out of the context of the curriculum framework for which they were constructed.

Evaluation of Large Scale Curriculum Projects

Three large scale nutrition curriculum projects, one developed at Utah State University, one at Pennsylvania State University, and one designed by the National Dairy Council, have been evaluated. At Utah State University, pre- and post-tests and performance in skillbooks were among the methods used to evaluate student learning among children in kindergarten through grade six in nine schools in Utah and Idaho (Brown, et al., 1979). The Pennsylvania State University curriculum for children in kindergarten through grade six was evaluated in 29 schools in Pittsburgh (Rye, 1979). Pre- and post-tests of knowledge for students and teachers were employed to evaluate student learning and the impact of teacher training on learning in the classroom. Teachers maintained logs to report details about the use and effectiveness of the activities.

The National Dairy Council evaluated curriculum for children in kindergarten through grade six in 20 schools in the United States (Talmage, 1978). Methods used to collect data for evaluating student learning, attitudes and their effect on food choices, and the effect of the curriculum on the on-going instructional program included tests, questionnaires, classroom observations, interviews, logs kept by teachers, and dialogues with school personnel.

Each of the three nutrition curriculum projects had specific evaluation objectives. Although some might question whether the evaluators selected the appropriate method for evaluation, the use of a variety of tools for evaluation was demonstrated. None of these programs used the 24-hour recall of food consumption or plate waste studies; their goals and objectives did not lend themselves to evaluation by these methods.

Future Assessment and Evaluation

It is likely that evaluation of nutrition education programs will not progress until specific research questions are identified and a conceptual framework is developed to guide the inquiry (Gillespie, 1979). Then a variety of available methods for educational evaluation may be utilized to estimate the achievement of specific project objectives. A research approach also may help to avoid the problems of organizing assessment and evaluation around available methods and selecting only those objectives which can be measured. Objectives related to specific questions will dictate the methods used to evaluate them.

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CHAPTER THREE

PARTICIPANT DATA COLLECTED DURING THE 1979 NET SUMMER WORKSHOPS (NETSW)

Description of Data Sets

During the nine 1979 NET Summer Workshops (NETSW) five sets of data were collected from 115 teams, each of which included a public school elementary teacher and the food service manager in her/his school. The data sets included:

1. participants' backgrounds in nutrition,
2. pre- and post-workshop scores on a test of knowledge of nutrition principles,
3. an assessment of the personal effectiveness of workshop facilitators,
4. participants' reactions to the goals and operation of the workshop as measured by the instrument "Overall Workshop Reaction," and,
5. participants' reactions to the workshop as measured by the instrument "Reaction to Overall Project."

Analysis and interpretation of these data sets is the subject of the following sections of this chapter.

Participants' Background in Nutrition Education

Sheldon Clark

Background information gathered initially from NETSW participants included the extent of their previous training and experience in nutrition education. The responses, which are summarized in Table 3.1 indicate that almost three-fourths of the teachers and food service personnel (FSP) who responded had no course work in, had attended no workshops in, and had not taught, nutrition education. Although differences existed between teachers and FSP in all three areas, differences were particularly noticeable in two areas--preparation and teaching experience in the area of nutrition.

Far more FSP had attended workshops in nutrition (42%) than had teachers (8%). In addition, more FSP had taken course work in nutrition than had teachers (31% vs. 26%). More teachers, however, apparently had taught nutrition education than had FSP (32% vs. 2%), although it should be noted that Question 5 for teachers was not directly comparable with Question 5 for FSP.

Since less than 30 percent of the respondents said yes to any of the items dealing with preparation and teaching experience in this area, it seems appropriate to conclude that the NETSW participants needed instruction in nutrition education.

TABLE 3.1. NET SUMMER WORKSHOPS:
PARTICIPANTS' BACKGROUND IN NUTRITION EDUCATION

Teachers' Question #3: "Have you ever taken a formal course in nutrition education?"

FSP Question #3: "Have you ever taken a course in nutrition education?

	Teachers	FSP	All Respondents
Yes	26%	31%	28%
No	74%	69%	72%
# of responses	119	107	226

Teachers' and FSP Question #4: "Have you ever attended a workshop (1-5 days) in nutrition education?"

	Teachers	FSP	All Respondents
Yes	8%	42%	24%
No	92%	58%	76%
# of responses	119	115	234

TABLE 3.1. (con't.)

Teachers' Question #5: "Have you ever taught or taken part in instruction in nutrition education?"

[illegible] Question #5: "Have you ever taught in nutrition education?"

	Teachers	FSP	All Respondents
Yes	32%	2%	18%
No	68%	98%	82%
# of responses	118	112	230

Comparison of Pre- and Post-Workshop Performance on a Test of Nutrition Knowledge

Sheldon Clark

Table 3.2 contains information about NETSW participants' knowledge of nutrition as measured by a test given near the beginning of the workshop and again near the end. Means and standard deviations are given for pre-tests, post-tests, and gain scores (post-test score minus pre-test score) for each workshop individually, and for all workshops grouped together. In considering the meaning of these data the reader is cautioned to make interpretations and generalizations with care for several reasons.

First, although in all cases the teachers' scores were higher than the corresponding FSP scores, it should be noted that the test of nutrition content was a verbal instrument and that the educational level of the teachers was markedly different from that of FSP. At the very least, the teachers had had more experience with tests. Perhaps gain scores provide the most legitimate comparison, but even these are somewhat biased (though to a lesser extent) in favor of those with higher levels of education.

Another reason for caution, which is related to the first, is the wider variation in scores for FSP than for teachers. The greater degree of heterogeneity among FSP scores indicates that their reported means include more extreme scores(either high or low) than do the means reported for teachers. This implies that the mean score for the teachers is a better indication of an "average" or "typical" score than is the mean score for FSP.

A third consideration in examining the test data is that the post-test was administered within the same week as the pre-test, using exactly the same instrument. Practice in test taking alone can explain some increase in post-test scores.

Finally, the user of this information should consider the instructional cues, both overt and covert, given to workshop participants to encourage them to acquire the nutrition content. In this connection many questions should be considered, such as:

- Was there equal motivation to learn for all members of the workshops? If not, did those with more motivation (e.g., college credit) perform better than those with less motivation?

- How much of the actual test content was included in the workshop manual; how much was covered verbally during the workshop itself?

- Was the amount of nutrition content covered constant from workshop to workshop, both in quantitative and qualitative terms? If not, how did performance differ under differing contingencies?

These questions and others like them can best be answered by those who conducted the workshops. These individuals should consider such questions and view the data in light of their answers; only in this manner can the maximum appropriate use of the pre- and post-test data be made.

Despite these cautions, some conclusions can be drawn from the data: For each workshop there was a significant increase in the total (i.e., teachers and FSP scores combined) mean post-test score on the test of nutrition knowledge when this was compared to the total mean pre-test score. Although the mean increase varied widely from workshop to workshop (from a 4-point gain to an 11-point gain), all improvements were statistically significant.*

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*The t-values listed with the gain scores were calculated from the mean scores for each workshop, using a single sample, independent t-test, one-tailed (since only positive changes were of interest):

$$t = \frac{\bar{G} - \mu_G}{s_G / \sqrt{n}}, \text{ against } t_{.05\ n-1,\ \text{one-tailed}}$$

where $\bar{G}$ = mean gain score for the group under consideration
s_G = standard deviation of the gain scores
n = number of subjects in the group
μ_G = mean gain score under null hypothesis = 0

TABLE 3.2. NET SUMMER WORKSHOPS: NUTRITION KNOWLEDGE TEST SCORES

(Score = Number Correct; Maximum Score = 50)

Workshop #1 (UT-Martin)

	Teachers	FSP	Total
No. Taking Both Tests	8	6	14
Pre-test Scores			
Mean	41.4	32.2	37.4
S.D.	2.9	8.0	7.2
Post-test Scores			
Mean	46.5	37.5	42.6
S.D.	1.9	9.1	7.4
Gain Scores (Post-test - Pre-test)			
Mean	5.1	5.3	5.2
S.D.	3.2	13.8	8.9
t-value			2.186*

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*p <05

Workshop #2 (Jackson)

	Teachers	FSP	Total
No. Taking Both Tests	12	12	24
Pre-test Scores			
Mean	34.9	32.3	33.6
S.D.	5.4	5.9	5.7
Post-test Scores			
Mean	47.3	41.1	44.2
S.D.	3.7	7.5	6.7
Gain Scores (Post-test - Pre-test)			
Mean	12.3	8.8	10.5
S.D.	5.2	5.6	5.6
t-value			9.186*

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*p<.05

Workshop #3 (Memphis)

	Teachers	FSP	Total
No. Taking Both Tests	8	11	19
Pre-test Scores			
Mean	37.5	31.3	33.9
S.D.	6.3	8.3	8.0
Post-test Scores			
Mean	40.1	36.8	38.2
S.D.	4.4	5.9	5.4
Gain Scores (Post-test - Pre-test)			
Mean	2.6	5.5	4.3
S.D.	3.5	6.3	5.4
t-value			3.471*

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*$p < .05$

Workshop #4 (Columbia)

	Teachers	FSP	Total
No. Taking Both Tests	15	15	30
Pre-test Scores			
Mean	38.7	29.7	34.2
S.D.	4.6	8.3	8.1
Post-test Scores			
Mean	46.7	38.7	42.7
S.D.	3.0	6.9	6.6
Gain Scores (Post-test - Pre-test)			
Mean	8.0	9.1	8.5
S.D.	3.0	3.7	3.4
t-value			13.693*

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*$p < .05$

Workshop #5 (MTSU)

	Teachers	FSP	Total
No. Taking Both Tests	14	12	26
Pre-test Scores			
Mean	35.7	33.8	34.8
S.D.	9.0	7.6	8.3
Post-test Scores			
Mean	44.5	42.0	43.3
S.D.	4.5	3.4	4.3
Gain Scores (Post-test - Pre-test)			
Mean	8.8	8.3	8.5
S.D.	7.6	4.8	6.3
t-value			6.880*

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*$p < .05$

Workshop #6 (Cookeville)

	Teachers	FSP	Total
No. Taking Both Tests	15	12	27
Pre-test Scores			
Mean	38.4	30.6	34.9
S.D.	8.1	10.3	9.8
Post-test Scores			
Mean	47.2	40.4	35.9
S.D.	2.6	6.8	5.9
Gain Scores (Post-test - Pre-test)			
Mean	8.8	9.8	9.3
S.D.	7.8	9.8	8.6
t-value			5.619*

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*$p < .05$

Workshop #7 (Cleveland)

	Teachers	FSP	Total
No. Taking Both Tests	14	14	28
Pre-test Scores			
Mean	37.8	30.6	34.2
S.D.	5.4	6.0	5.9
Post-test Scores			
Mean	44.0	39.3	41.6
S.D.	5.9	5.2	5.9
Gain Scores (Post-test - Pre-test)			
Mean	6.2	8.6	7.4
S.D.	4.7	6.9	5.8
t-value			6.8*

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*$p < .05$

Workshop #8 (UT-Knoxville)

	Teachers	FSP	Total
No. Taking Both Tests	15	15	30
Pre-test Scores			
Mean	36.4	29.3	32.8
S.D.	5.5	6.5	6.9
Post-test Scores			
Mean	48.5	44.5	46.5
S.D.	2.9	4.5	4.4
Gain Scores (Post-test - Pre-test)			
Mean	12.1	15.2	5.0
S.D.	5.0	13.6	7.1
t-value			11.824*

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*$p < .05$

Workshop #9 (Johnson City)

	Teachers	FSP	Total
No. Taking Both Tests	11	11	22
Pre-test Scores			
Mean	36.9	34.3	35.6
S.D.	5.4	6.3	5.9
Post-test Scores			
Mean	43.8	39.7	41.8
S.D.	3.9	6.8	5.8
Gain Scores (Post-test - Pre-test)			
Mean	6.9	5.5	6.2
S.D.	2.2	3.9	3.2
t-value			9.1*

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*$p < .05$

SUMMARY DATA

Workshops #1, #2, #3, #4, #5, #6, #7, #8, #9

	Teachers	FSP	Total
No. Taking Both Tests	112	108	220
Pre-test Scores			
Mean	37.4	31.4	34.4
S.D.	4.6	8.6	7.5
Post-test Scores			
Mean	45.7	40.3	43.0
S.D.	4.3	6.4	6.1
Gain Scores (Post-test - Pre-test)			
Mean	8.3	8.9	8.6
S.D.	4.7	6.9	5.8
t-value			6.8*

*$p < .05$

Effectiveness of Workshop Facilitators

Wilma Jozwiak

One goal of the 1979 NETSW program was to provide participants with training in nutrition and the teaching of nutrition. A second goal considered equally important was to help each pair of participants from individual schools become a working team. In addition to the presentation of nutrition-related information, the team development goal required the workshop facilitators to initiate and interact in special activities designed to establish and/or enhance communication between the team members. The facilitators tried to help each team develop a comfortable style of interaction which the team was then called upon to use in the development of their Back Home Action Plan (BHAP). Workshop planners believed that effective implementation of the BHAPs depended at least in part upon the development of "team spirit."

The second goal of the workshop, development of a team mentality between members of the pair from each school, required a special kind of functioning on the part of workshop facilitators. In an attempt to determine their effectiveness in the eyes of the participants the facilitators used a Facilitator Feedback Form developed by Robert Davis and Associates. The form (see Table 3.3) consists of seven scales. The participants were asked to rate the facilitators' degree of success in seven aspects of training on a scale of one (low) to six (high). The aspects rated were Support for People, Non-judgmental Behavior, Respect for People's Feelings, Clear Instructions, Knowledge of Materials, Desire to Help, and Congruence. Participants' responses were confidential; response forms were not identified by name or by career. All responses reported, therefore, are summed across careers by workshop. An eighth variable, labeled Success, was formed by summing the scores across all seven scales.

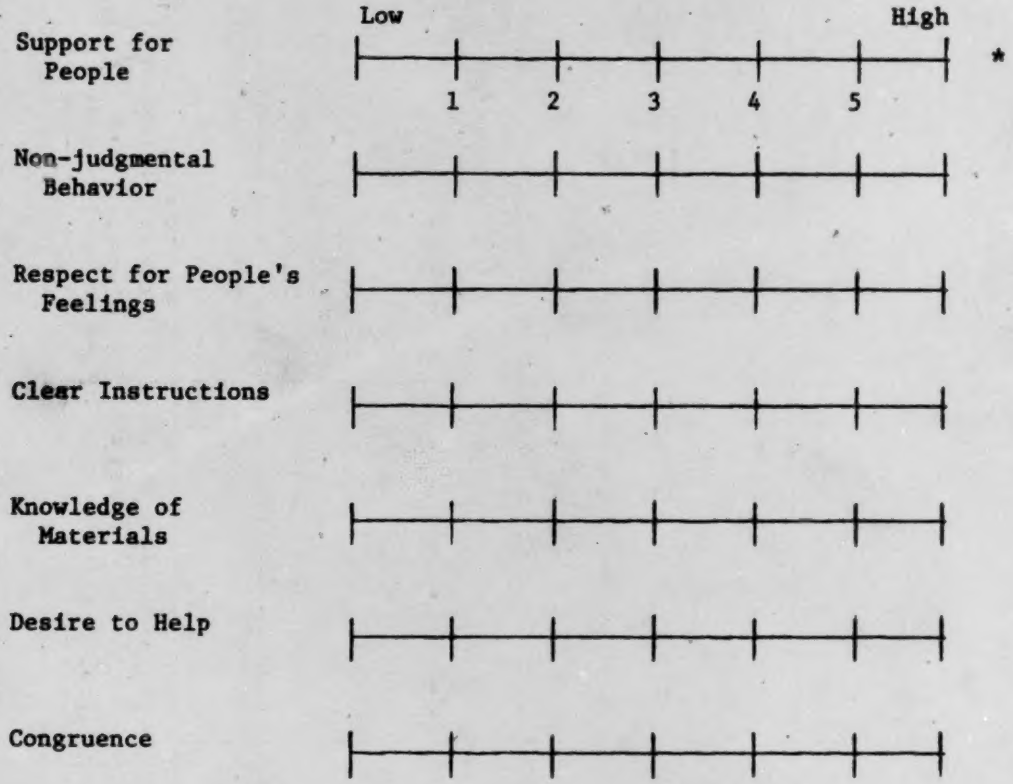
A total of 398 NETSW participants completed Facilitator Feedback Forms; the form was not administered at Workshop One, held at Martin, Tennessee, or at Workshop Two, held at Jackson, Tennessee. Workshop participants' assessments of the facilitators were highly positive on every variable. In the following section of this report, each variable is discussed individually, and statistically significant differences between workshops on the artificial variable "Success" (combining the other seven variables) are discussed. Numerical results are recorded in Table 3.4.

Support for People

The ability of a workshop facilitator to provide support for workshop participants is important in any learning situation; it is particularly important in a workshop that emphasizes interpersonal skills training, which may be threatening to many people. Two hundred and forty-seven persons (71%) rated the facilitators 5 or 6 on this scale. The largest number of NETSW participants (230, or 59%) rated the facilitators 5 on Support for People. Only 42 persons (11%) gave a 3 or lower rating on this scale, with the majority of these (27, or 7%) falling at 3. The mean score was 4.7 on the Support for People variable. Eight individuals chose not to score this scale, or scored it in such a way as to invalidate the response.

TABLE 3.3. FACILITATOR FEEDBACK FORM

Mark the scale according to the degree of success you felt the facilitator achieved in each aspect of his skill in delivering training.


Low
High
Support for People
*
1
2
3
4
5
Non-judgmental Behavior
Respect for People's Feelings
Clear Instructions
Knowledge of Materials
Desire to Help
Congruence

---

*Responses marked up to or on 1 were scored 1, responses from 1 up to or on 2 were scored 2, et cetera. Responses between 5 and the right hand end mark of each scale were scored 6.

TABLE 3.4. RESPONSES ON THE FACILITATOR FEEDBACK FORM

Response	Support for People	Non-judgmental Behavior	Respect for People's Feelings	Clear Instructions	Knowledge of Materials	Desire to Help	Congruence
1 (Low)	1.0%	2.6%	2.0%	1.0%		.05%	1.0%
2	2.8%	2.8%	4.0%	5.3%	.08%	2.0%	2.8%
3	6.9%	10.7%	7.6%	11.8%	5.6%	4.8%	10.6%
4	18.2%	18.4%	13.1%	19.3%	18.4%	14.6%	17.3%
5	59.0%	55.5%	60.6%	51.0%	59.8%	63.6%	56.7%
6 (High)	12.1%	10.0%	12.6%	10.3%	15.4%	14.4%	11.6%
No. of Responses	390	391	396	393	396	396	388

Non-judgmental Behavior

An important component of interpersonal skills training is the facilitator's ability to accept many different expressions and viewpoints without imposing his or her own value system upon the participant. This may be especially true when two groups of persons who normally do not work together are receiving training, as in this case where teachers and food service managers were attempting to become a team. NETSW participants responded slightly less positively on this variable than on Support for People, although the overall rating was predominately positive. Two hundred and fifty-six persons (65%) rated the facilitators 5 or 6 on Non-judgmental Behavior, while 63 (16%) rated the facilitators 3 or lower. The majority of these lower ratings fell at 3 (42 persons, or 11%). The mean score on the Non-judgmental Behavior scale was 4.5. Seven persons chose not to respond on this scale, or responded in such a manner as to invalidate the response.

Respect for People's Feelings

In a workshop setting where people may experience confusing reactions to the training they are receiving, or in which compromise is necessary, as it was in the intra-team development of the Back Home Action Plan for the implementation of nutrition education in the school, it is important that workshop facilitators project a genuine concern and respect for the feelings of the workshop participants. The NETSW facilitators were successful in relaying to participants their respect for people's feelings: 290 persons (73%) rated the facilitators 5 or 6 on this variable, while only 54 (14%) rated them 3 or lower, with the concentration of these scores (30, or 8%) falling at 3. The facilitators received a mean score of 4.6 on this scale. Two persons chose not to respond on this scale, or scored it in such a manner as to invalidate the response.

Clear Instructions

NETSW participants had to produce a plan for implementation of nutrition education in their schools, learn to work in a team with the other participant from their school, and absorb knowledge about nutrition curriculum and content, all within a five-day period. It was essential that instructions to participants be clear to avoid misunderstandings that would result in lost time or ineffective planning for the school year. While overall ratings were still positive, the facilitators received their lowest ratings on this variable: 244 persons (61%) rated the facilitators 5 or 6, while 72 persons (18%) rated them 3 or lower, with the concentration (47 persons, or 12%) falling at 3. A mean score of 4.5 was received on this scale. Five persons chose not to respond on this scale, or scored it in such a way as to invalidate the response.

Knowledge of Materials

Presentation of nutrition content and curriculum planning assistance were integral parts of the 1979 NET Summer Workshops. The amount of knowledge about nutrition and nutrition materials that the facilitators brought to their jobs definitely would affect the success of such a workshop.

The NETSW facilitators received high marks on the Knowledge of Materials variable. Two hundred and ninety-eight persons (75%) rated the facilitators 5 or 6 on this scale, while only 25 persons (6%) rated them 3 or lower, with the concentration (22 persons, or 6%) falling at 3. The mean score on this scale was 4.8. Two persons chose not to respond on this scale, or scored the scale in such a way as to invalidate the response.

Desire to Help

Like respect for others, the desire to help is an important characteristic of workshop facilitators directing workshops requiring participants to acquire and practice new skills. Seventy-eight percent of NETSW participants (309 persons) rated the NETSW facilitators 5 or 6 on Desire to Help, while only 7 percent (29 persons) rated them 3 or lower, with the concentration (5%, or 19 persons) falling at 3. The mean score on this variable was 4.8. Two persons chose not to rate the facilitators on this scale, or scored the scale in such a way as to invalidate the response.

Congruence

The degree to which the stated objectives of a workshop are congruent with the actual content is likely to affect the participants' satisfaction with the workshop. Sixty-eight percent of NETSW participants (265 persons) rated the facilitators 5 or 6 on the Congruence scale, while 15 percent (56 persons) rated them 3 or less, with the concentration (11%, or 41 persons) falling at 3. The facilitators received a mean score of 4.6 on this scale. Ten persons chose not to score this variable, or scored it in such a way as to invalidate the response.

Success

"Success" was an artificial variable created by summing the respondents' scores across all seven scales of the Facilitator Feedback Form. The lowest summed rating provided by any participant across the seven scales was 10 (1 participant), while the highest was a perfect 42 (32 persons). The mode was 35 (134 persons, or 34%), while the median was 34.5 and the mean was 32.5. The facilitators' mean score per scale was 4.7.

Differences by Workshop

The artificial Success variable was subjected to a test of statistical significance, using the Tukey-HSD Multiple Range test. Mean scores ranged from 29.4 (Workshop 8) to 36.1 (Workshop 9) (see Table 3.5). The mean Success score for Workshop 8 was significantly lower than the mean Success scores for Workshops 6, 4, 7, and 9. The mean Success scores for Workshops 3 and 5 were significantly lower than the mean Success scores for Workshops 4, 7, and 9. Conversely, the mean Success scores for Workshops 7 and 9 were significantly higher than those for Workshops 6, 5, 3, and 8, while the mean Success score for Workshop 4 was significantly higher than that for Workshops 5, 3, and 8.

Differences among workshops on the questionnaires administered at the Follow-up Sessions held in Fall 1979 and Spring 1980 (see Chapter Four) do not suggest explanations for the differences found on the Facilitator Feedback Form. It is likely that personal factors figured heavily in the participants' ratings, due to the highly subjective nature of the interpersonal skills training portion of the workshops. Ratings on all scales indicated positive participant response to the facilitators on the variables measured; however, the response format featured in this instrument tends to produce acquiescent responses. That is, respondents tend to give positive ratings. It is more useful, therefore, to look at individual scales in relation to one another rather than against a hypothetical average response.

The lowest mean score was received on the Clear Instructions scale. The complexity of the task set before NETSW participants was such that the clarity of instructions given was very important. Responses on the Second Follow-up Session Questionnaire (reported in Chapter Four) indicate that the dissatisfaction probably lay with instructions relating to the expected team performance for the subsequent year. At any rate, taking care to make directions explicitly clear would seem to be indicated for future NETSW facilitators.

Participants' Responses to Items on the "Overall Workshop Reaction" Form

Sheldon Clark

Table 3.6 contains summaries of responses to questions about the NETSW experience which were gathered using a questionnaire administered near the end of each workshop. Responses to each question are recorded in terms of the percentage of respondents who chose a particular reply for each workshop, and for all workshops grouped together. The latter category is further broken down into responses by teachers and FSP.

The summaries for individual workshops can be of most value to those who conducted these workshops, since external judgments cannot take into account assets and liabilities which might have been operating in one workshop but not in another. The obvious differences among the responses for the nine workshops can serve as a basis for the facilitators of these workshops to assess the strengths and weaknesses of their various approaches. This reflecting on what happened in one workshop that did not happen in another would be particularly appropriate in those areas which produced the widest range of responses from workshop

TABLE 3.5. WORKSHOP DIFFERENCES ON THE PSEUDO-VARIABLE "SUCCESS" SIGNIFICANT AT THE .05 LEVEL ON THE TUKEY-HSD MULTIPLE RANGE TEST

		WORKSHOP						
Mean	Workshop	8	3	5	6	4	7	9
29.40	Workshop 8 Knoxville							
29.80	Workshop 3 Memphis							
30.58	Workshop 5 Nashville							
32.37	Workshop 6 Cookeville	*						
34.70	Workshop 4 Columbia	*	*	*				
35.47	Workshop 7 Cleveland	*	*	*	*			
36.14	Workshop 9 Johnson City	*	*	*	*			

Asterisks denote pairs that are significantly different from one another.

to workshop--clarity of goals, organization of the meeting, attitude about the meeting, and presentations dealing with communications skills and instructional skills.

In examining the data one must be cautioned against reaching broad conclusions based on differences between responses of teachers and FSP. Differences in responses might have been more indicative of the respondents' own social status relative to that of the persons being evaluated (workshop facilitators), and a possible accompanying reluctance (or eagerness) to criticize them, than of any "true" differences in feelings. This factor should be weighed by workshop leaders and its relative importance considered for each workshop.

It is apparent from even a cursory examination of the summaries that responses were overwhelmingly positive on all twelve items, with even the lowest level of total positive endorsement (4s or 5s on the scales) being 75 percent (on the question about organization of the meeting).

The highest rating (95% of respondents chose 4s and 5s) was given in response to the question on how the participant felt about his/her relationship with the other participants. This indicates that the facilitators were very successful in breaking down any interpersonal barriers which might have existed initially between teachers and FSP.

Another strong point seemed to be the degree to which NETSW participants felt that participation by all was encouraged and accomplished. For seven of the nine workshops positive responses on this dimension (again, 4s and 5s on the continuum) were given by more than 90 percent of the participants.

The item which perhaps assesses most directly the overall worth of the workshops is Question 12, which deals with productivity--how useful the meeting was, both in terms of accomplishment and future possibilities. More than 83 percent of the respondents felt good about the productivity of the meeting at eight of the nine workshops, and in all, 86 percent of the 228 respondents indicated positive assessments of the productivity of the workshops.

TABLE 3.6. NET SUMMER WORKSHOPS PARTICIPANTS' RESPONSES TO "OVERALL WORKSHOP REACTION" FORM

Code Numbers for Workshops:

- #1 - UT-Martin
- #2 - Jackson
- #3 - Memphis
- #4 - Columbia
- #5 - MTSU
- #6 - Cookeville
- #7 - Cleveland
- #8 - UT-Knoxville
- #9 - Johnson City

1. Goals of the meeting

Poor: 1 2 3 4 5 Good:
(unclear; diverse; conflicting; unacceptable)
(clear; shared by all; endorsed with enthusiasm)

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Poor = 1	6%		10%	4%				3%		4%	2%	2%
2			7%	11%	7%			7%		5%		4%
3	38%	4%	14%	11%	14%	4%	10%	27%		14%	11%	13%
4	25%	21%	28%	46%	39%	25%	55%	33%	16%	36%	32%	34%
Good = 5	31%	75%	41%	28%	40%	71%	35%	30%	84%	41%	56%	47%
# of responses	16	24	29	28	28	28	29	30	19	112	104	231

*Including those who did not indicate career position

2. Participation in the meeting

Poor:______1______2______3______4______5______Good:

(few dominate; some passive; some not listened to; several talk at once or interrupt)

(all get in; all are really listened to; open and lively discussion)

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Poor = 1												
2	6%			4%	3%					2%	1%	2%
3	6%	4%	7%	4%	25%		10%	10%		6%	8%	8%
4	19%	13%	24%	41%	36%	14%	35%	40%	5%	27%	27%	26%
Good = 5	69%	83%	69%	51%	36%	86%	55%	50%	95%	65%	64%	64%
# of responses	16	24	29	27	28	28	29	30	19	112	103	230

*Including those who did not indicate career position

3. Leadership of the meeting

Poor:______1______2______3______4______5______Good:

(group needs for leadership not met; group depends too much on one or a few persons; no direction or no leadership)

(a sense of direction; leaders allowed to emerge as needs for leadership arise; everyone feels free to volunteer to lead)

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Poor = 1					4%					1%		1%
2			10%			4%				3%	1%	2%
3	19%		24%	15%	25%			17%		12%	8%	11%
4	19%	13%	38%	19%	25%	14%	14%	23%	5%	21%	18%	19%
Good = 5	62%	87%	28%	66%	46%	82%	86%	60%	95%	63%	73%	67%
# of responses	16	24	29	27	28	28	29	30	19	112	103	230

*Including those who did not indicate career position

4. Decisions made during the meeting

Poor:______1______2______3______4______5______Good:

(no decisions were made; decisions were made to which I feel uncommetted; bad decisions were made)

(good decisions were made; everyone felt a part of the decision-making process; people feel committed to the decision)

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Poor = 1												
2			4%					3%			1%	1%
3	13%		17%	11%	11%	7%		13%		12%	5%	8%
4	31%	13%	31%	22%	46%	33%	39%	40%		28%	29%	30%
Good = 5	56%	87%	48%	67%	43%	60%	61%	44%	100%	60%	65%	61%
# of responses	16	24	29	27	28	27	28	30	19	110	103	228

*Including those who did not indicate career position

5. Your feeling during the meeting

Poor:______1______2______3______4______5______Good:

(I was unable to express my feelings: my feelings were ignored; my feelings were criticized)

(I freely expressed my feelings; I felt understood; I felt support from the participants)

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Poor = 1			3%							1%		1%
2	6%		3%	4%				3%		2%	1%	2%
3	13%		14%	7%	25%		7%	13%		9%	9%	9%
4	25%	8%	28%	22%	39%	32%	36%	27%	16%	25%	27%	26%
Good = 5	56%	92%	52%	67%	36%	68%	57%	57%	84%	63%	63%	62%
# of responses	16	24	29	27	28	28	28	30	19	111	103	229

*Including those who did not indicate career position

6. Organization of the meeting

Poor:______ 1 ______ 2 ______ 3 ______ 4 ______ 5 ______Good:

(it was chaotic; it was too tightly controlled: very poorly done; I felt manipulated)

(it was very well organized; it was flexible enough so we were able to influence it; all went smoothly)

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Poor = 1					4%			3%		2%		1%
2			17%	4%	4%			7%		6%	1%	4%
3	12%	4%	38%	18%	25%	11%		17%		17%	11%	15%
4	44%	29%	17%	30%	46%	35%	52%	40%	6%	37%	33%	34%
Good = 5	44%	67%	28%	48%	21%	54%	48%	33%	94%	38%	55%	46%
# of responses	16	24	29	27	28	28	27	30	18	109	103	227

*Including those who did not indicate career position

7. Relationship among meeting participants

Poor:______ 1 ______ 2 ______ 3 ______ 4 ______ 5 ______Good:

(my relationship with them is the same as before; I feel antagonistic towards many of them; I don't trust them; there is little potential for a future relationship)

(our relationship is much improved; I trust them more than I did prior to the session; I feel I got to know them better; there is good potential for the future)

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Poor = 1												
2					4%					1%		1%
3			10%	4%	7%		4%	7%			5%	4%
4	19%	13%	24%	22%	29%	18%	23%	17%	6%	23%	18%	19%
Good = 5	81%	87%	66%	74%	60%	82%	73%	76%	94%	76%	77%	76%
# of responses	16	24	29	27	28	28	26	30	18	109	102	226

*Including those who did not indicate career position

8. Attitude about the meeting

Poor: 1 2 3 4 5 **Good:**

(boring; it was a waste of time; I don't like the way it was presented; disliked it)

(interesting; was helpful; liked it)

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Poor = 1												
2	6%		13%	4%	11%			7%		7%	2%	5%
3	6%	4%	28%	15%	21%	7%		23%	6%	13%	11%	13%
4	38%	21%	28%	41%	32%	32%	39%	30%	16%	35%	29%	31%
Good = 5	50%	75%	31%	40%	36%	61%	61%	40%	78%	45%	58%	51%
# of responses	16	24	29	27	28	28	28	30	18	110	103	228

*Including those who did not indicate career position

9. Presentation of Interpersonal Skills/Communication (Day I)

Poor: 1 2 3 4 5 **Good:**

(uninstructional; did not learn much, not informative; too many exercises; too much processing; not enough content)

(learned a lot; was informative; I'll be able to use exercises and materials)

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Poor = 1			3%	4%	4%					3%		2%
2	6%			7%	15%	4%		3%		4%	3%	4%
3	25%	4%	17%	26%	15%	11%	14%	17%	5%	16%	12%	15%
4	25%	29%	45%	30%	37%	14%	29%	23%	17%	30%	28%	28%
Good = 5	44%	67%	35%	33%	29%	71%	57%	57%	78%	47%	57%	51%
# of responses	16	24	29	27	27	28	28	30	18	109	103	227

*Including those who did not indicate career position

10. Presentation of Interpersonal Skills/Team Building (Day II)

Poor:______1______2______3______4______5______Good:

(uninstructional; did not learn much; not informative; too many exercises; too much processing; not enough content)

(learned a lot; was informative; I'll be able to use exercises and materials)

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Poor = 1			3%	4%						2%		1%
2			3%	4%	18%			3%		5%	1%	3%
3	25%	4%	18%	19%	11%		7%	17%	5%	15%	7%	12%
4	31%	21%	45%	33%	43%	25%	36%	20%	17%	31%	31%	30%
Good = 5	44%	75%	31%	40%	28%	75%	57%	60%	78%	47%	61%	54%
# of responses	16	24	29	27	28	28	28	30	18	110	103	228

*Including those who did not indicate career position

11. Presentation of Instructional Skills (Day III)

Poor:______1______2______3______4______5______Good:

(uninstructional; did not learn much; not informative; too many exercises; too much processing; not enough content)

(learned a lot; was informative; I'll be able to use exercises and materials)

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Poor = 1			7%		4%					3%		2%
2			14%	4%	7%	4%		7%		6%	3%	4%
3	13%		21%	11%	14%	4%	4%	20%		11%	6%	10%
4	31%	25%	31%	52%	46%	18%	32%	33%	29%	35%	34%	33%
Good = 5	56%	75%	27%	33%	29%	74%	64%	40%	71%	45%	57%	51%
# of responses	16	24	29	27	28	28	28	30	17	110	102	227

*Including those who did not indicate career position

12. Productivity of the meeting

Poor:_______1_______2_______3_______4_______5_______Good:

(didn't accomplish much; no useful ideas emerged; it got us nowhere)	(got a lot done; very fruitful; something will come of this session)

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Poor = 1			3%							1%		1%
2			7%		4%					3%		2%
3	6%		21%	4%	11%	4%	4%	17%		13%	6%	7%
4	19%	17%	34%	11%	50%	14%	21%	30%	17%	28%	18%	24%
Good = 5	75%	83%	35%	85%	35%	82%	75%	53%	83%	58%	76%	62%
# of responses	16	24	29	27	28	28	28	30	18	110	103	228

*Including those who did not indicate career position

Participants' Responses to Items on the "Reaction to Overall Project" Form

Sheldon Clark

The instrument "Reaction to Overall Project" served as a further assessment of the value of the NETSW program with an emphasis on identification of positive and negative aspects of the experience through open-ended questions. Responses to items on this instrument appear in Table 3.7, summarized by workshop, by career position of the respondent, and for all workshops grouped together.

In response to the only question which did not allow the respondent to identify positive or negative aspects of the workshop in an open-ended fashion (Question 1), 99 percent of all participants indicated that at least something of value happened to them during the meeting; 77 percent indicated that quite a lot of value happened to them.

Since response distributions for Question 2, 3, 4, and 5 do not necessarily indicate positive or negative feelings about NETSW, it is more instructive to consider the types of open-ended responses which were given to these four questions. An examination of the responses shows that the two questions which dealt with positive aspects of the workshop (#2 and #4) and the two that dealt with negative aspects (#3 and #5) were distinguishable, but there appeared to be much overlap between the positive responses in #2 and #4; also, there seemed to be no logical distinction between the responses to the two negative questions, #3 and #5. For this reason, positive and negative responses are mentioned without reference to the question to which the response was given.

The most frequently occurring themes in the many positive responses given (well over half of the questionnaires examined contained identified positive aspects of the workshop experience) revolved around:

- teamwork,
- the relaxed atmosphere,
- the openness and support of the coordinators,
- the mutual sharing of ideas, and
- the completion of the "Back Home Action Plan."

Some typical responses to the item requesting identification of features which stood out as being of particular value or especially effective were as follows:

- We had a close feeling for each other and the coordinators.
- They (coordinators) were very cooperative and thorough.
- We completed our BHAP!
- The fishbowl exercises in the sharing of plans.
- Desire of teams to help each other.
- Sound teamwork and the development of a good BHAP.

Many of the comments dealt directly or indirectly with interpersonal relationships that were developed. Besides the comments about support and effective teamwork, which also illustrated the development of good communications skills, there were other frequently given comments which dealt exclusively with personal bonds and feelings:

- We learned to listen more attentively and understand each other better.
- We got to know each other as individuals.
- The group was warm and gave each other feelings of importance.

Other positive comments which were given somewhat less often dealt with more specific activities such as resource labs, specific sharing activities, and decision-making processes.

Negative comments were far more limited in number than the positive responses. There were, however, very definite areas of criticism. Interestingly, the two elements of the workshop that brought the most criticism were also the subject of many positive comments--the BHAP and interpersonal skills exercises. For the most part, criticisms related to the BHAP centered around the need for more time to be devoted to it. Common complaints follow:

- More time should be spent on BHAP.

- Instructions for BHAP should have been given earlier in the week.

- More time working on BHAP.

Even though the degree of interpersonal communications attained during the workshops was the source of many positive comments and undoubtedly contributed to the positive outcomes, nevertheless, the time spent on activities designed to develop interpersonal skills was often questioned:

- Too much time was spent on communications skills.

- Less time could be spent on interpersonal skills and more time working on BHAP.

Another series of negative comments was related to a positive comment made by many respondents. Some teachers made comments about frustrations and lack of clarity of responsibilities that they perceived on the part of FSP. Although such comments were less common among FSP themselves, it was noteworthy that teachers were "looking out" for their team members. The following are representative comments of teachers on this issue:

- The (FSP) had no idea how to write objectives, lesson plans, etc. They were frustrated. More time should be spent giving them the necessary background.

- I feel that many (FSP) became confused and frustrated with what was expected of them.

Other less frequently occurring criticisms dealt with specific problems such as the desire for purposes of specific activities to be stated in advance, difficulty in understanding the workshop manual, and discomfort caused by some of the activities.

In summary, the positive responses far outweighed the negative ones and indicated a high degree of satisfaction with the outcomes of the experience. The general themes underlying both positive and negative feedback should serve to help workshop coordinators identify areas of strength and weakness, so that strengths can be built upon and sources of weakness considered in planning future workshops.

TABLE 3.7. NET SUMMER WORKSHOPS PARTICIPANTS' RESPONSES TO "REACTION TO OVERALL PROJECT" FORM

Code Numbers for Workshops:

#1 - UT-Martin
#2 - Jackson
#3 - Memphis
#4 - Columbia
#5 - MTSU
#6 - Cookeville
#7 - Cleveland
#8 - UT-Knoxville
#9 - Johnson City

1. "Do you feel that anything of value happened to you during this meeting?"

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Yes, quite a lot	75%	100%	73%	67%	69%	86%	89%	73%	84%	73%	88%	79%
Yes, something	25%		27%	33%	28%	14%	11%	27%	16%	26%	12%	20%
Not much					3%					1%		1%
Nothing												
# of responses	16	24	30	27	29	28	28	30	19	111	105	231

*Including those who failed to indicate career position

2. "If you found something of value in this meeting, does any particular happening or idea stand out in your mind?"

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Nothing of value happened												
It was a valuable meeting, but no particular thing stands out.	31%	21%	37%	31%	45%	57%	36%	48%	28%	31%	42%	39%
Yes, something does stand out for me.	69%	79%	63%	69%	55%	43%	64%	52%	72%	69%	58%	61%
Number of responses	16	24	30	26	29	28	28	29	18	110	103	228

*Including those who failed to indicate career position

3. "If you found something in this meeting to be of no value, was there a particular happening or idea that stands out in your mind as being worthless?"

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
Most everything was of some value	88%	92%	68%	63%	71%	74%	92%	81%	95%	70%	90%	79%
Some parts of the meeting have no value, but no particular thing stands out			18%	11%	25%	19%	4%	15%		13%	7%	12%
Yes, something stands out for me as worthless (having no value)	12%	8%	14%	26%	4%	7%	4%	4%	5%	17%	3%	9%
Number of responses	16	24	28	27	28	27	28	27	18	107	102	224

*Including those who failed to indicate career position

4. "Was there any feature about the way this group operated that you thought particularly effective?"

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
No	6%	13%	30%	12%	32%	30%	25%	34%	21%	23%	24%	26%
Yes	94%	87%	70%	88%	68%	70%	75%	66%	79%	77%	76%	74%
# of responses	16	24	30	26	28	27	28	29	19	111	101	208

*Including those who failed to indicate career position

5. "Was there any feature about the way this group operated that you thought particularly ineffective?"

	BY WORKSHOP									BY CAREER		TOTAL*
	#1	#2	#3	#4	#5	#6	#7	#8	#9	Teachers	FSP	All Respondents
No	75%	83%	66%	78%	85%	63%	79%	97%	100%	76%	86%	80%
Yes	25%	17%	34%	22%	15%	37%	21%	3%		24%	14%	20%
# of responses	16	24	29	27	27	27	28	29	19	110	101	226

*Including those who failed to indicate career position

Summary

The evaluators had no part in designing the instruments utilized to obtain information from 1979 NETSW participants. They were concerned because the number of instruments administered seemed excessive, and some of the items were ambiguous. In an attempt to rectify these and other weaknesses, the evaluators designed a new set of evaluation instruments for the 1980 NETSW program. An explanatory letter of transmittal and the instruments are included in Appendix E.

Despite their inherent weaknesses, the 1979 NETSW evaluation instruments yielded the following information, which indicated that the training program had had a positive impact.

(1) The need for further training in nutrition education on the part of NETSW participants was clearly established at the outset: fewer than 30 percent reported prior preparation or experience in teaching nutrition education.

(2) At each of nine workshops participants posted a significant mean gain in knowledge of nutrition principles as measured by a test given before and after workshop instruction in nutrition.

(3) Workshop facilitators were given high marks (mean of 4.7 on a scale of 6) for their work in providing direction and support for the workshop activities of participants.

(4) Participants expressed overwhelmingly positive reactions to workshop purposes and the procedures designed to achieve them.

CHAPTER FOUR

1979 NETSW FOLLOW-UP DATA

The evaluators designed a series of instruments to collect information concerning the effectiveness with which 1979 NETSW participants were able to implement the Back Home Action Plans they had developed during the summer workshops. This chapter contains a summary of the data obtained on (1) the project monitoring system which was established, (2) the two half-day support or "Follow-up Sessions" held in each development district to permit NETSW participants to share ideas and discuss common concerns, and (3) the "Sharing Sessions" during which 1979 NETSW teams shared the knowledge of nutrition education gained in the summer workshops with others in their school systems.

"On Site Evaluation": Assessment of the Project Monitoring System

Sheldon Clark

During Spring 1979 the State NET Coordinator held an "Introductory Conference" for the purpose of acquainting administrators in the school systems of designated 1979 NETSW participants with the NET Program, with NETSW, and with the back-home activities which workshop participants would be expected to carry out during 1979-80. These administrators included system level supervisors of instruction and of food services who were asked to serve as monitors of the local implementation activities of the teacher-food service manager teams that participated in the 1979 NET Summer Workshops.

In November 1979 the evaluators mailed to each designated NETSW monitor a questionnaire entitled "Nutrition Education Team Project: On Site Evaluation." Questionnaires were returned by 128 monitors--at least one for each of the 115 NETSW teams.

Most (68.7%) of the respondents had visited the NETSW team's school once, for a modal period (36.9%) of one hour, to evaluate progress in inplementing the team's Back Home Action Plan. Since 125 of the monitors reported that their regular job responsibilities included opportunities to observe at least one of the team members in their work, it is likely that the monitoring itself did not affect the activity observed.

Virtually all monitors indicated that they were familiar with the Tennessee NET Program (100%) and the Back Home Action Plan (BHAP) of the team being evaluated (99%). Almost all felt confident in their roles as evaluators (90.4%), and in their evaluations of the success of the BHAPs (96.9%). In spite of this general feeling of confidence, however, 22 people (19.2%) indicated that someone else could have evaluated the project more adequately, and another 20 (17.4%) were unsure. Of the 17 who specified the position of a more qualified monitor, 8 listed a principal, 8 named nutrition specialists or supervisors, and one suggested a classroom supervisor.

Two-thirds of the respondents indicated that they had gained knowledge useful to them in their work as monitors at the Introductory Conference, which 116 or 90.6%, of the respondents had attended in Spring 1979.

Most of the NETSW teams had fulfilled their obligation to keep the monitors informed of their plans: 119 monitors (93%) had copies of the appropriate BHAP, and 95 (81.2%) had had it for more than a month. In addition, 93 (73.8%) had been told which BHAP Action Step would be the subject of their observation.

The NETSW teams' progress in implementing their BHAPs as reported by the monitors, was as follows: 62.1 percent of the teams represented had completed at least 5 Action Steps, and only 11.8 percent had as many as 7 steps left to complete; 126 (98.4%) of the BHAPs were judged to be successful overall. In all but 15 cases, both the teacher and food service manager were involved in the activity which was the focus of the evaluation. Although total effort expended in implementing the plan in its entirety was perceived to be weighted slightly toward the teachers' contribution (median - 57.6%), the most commonly reported (43.2% of cases) distribution of effort between the teacher and food service manager was 50-50.

In addition to examining the preceding responses, several relationships which were of interest a priori were investigated. These included the relationship between items #19 and #22 (overall success of BHAP and team effectiveness); that between items #4 and #5, #6, #10, #11, #12, #19, #20 (attendance at Introductory Conference and several measures of confidence and judgment); and several interrelationships among the above items. The markedly skewed nature (i.e., the preponderance of positive responses) to these items, however, precluded meaningful interpretation of even statistically significant relationships. For this reason, therefore, these results were deemed to be of little practical value.

In summary, the project monitoring system appeared to have worked quite successfully. The Introductory Conference left two-thirds of the monitors feeling prepared to do their jobs as monitors. Virtually all monitors were familiar with the BHAP of the team they were to observe, knew what they would be observing when they arrived for their monitoring visit, and had every reason to be accepted by the team they were to monitor since their regular job responsibilities gave them other opportunities to observe the work of at least one of the team members.

More than 98 percent of the BHAPs were considered to be successfully implemented, according to the monitors. In all except a few cases, successful teamwork was in evidence since both teacher and food service manager were involved in the activity observed by the monitor. In the opinion of the monitors, more than 99 percent of the teams worked together effectively.

SUMMARY OF RESPONSES (128 RESPONDENTS)

NUTRITION EDUCATION TEAM PROJECT
ON-SITE EVALUATION

card column

Name of Monitor: ______________________ (1-3)

Position of Monitor: ______________________ (4-5)

Number of Visits: Mean = 1.6, Median = 1.2, Mode = 1 (68.7% of cases) Minimum = 1 Maximum = 8 (6)

Total time spent observing team members: Mean = 114.6, Median = 85.6, Mode = 60 (36.9% of cases) Minimum = 15 Maximum = 540 (7-9)
(in minutes)

The purpose of this evaluation is to furnish information to Nutrition Education Training Program personnel about:

(a) the usefulness of the spring Introductory Conference for administrators;
(b) the progress and success of "back home" team projects, including evidence of a team effort in its implementation; and
(c) the extent to which the team projects have contributed to the involvement of others in nutrition education.

Your thoughtful cooperation in providing this information will be greatly appreciated.

A. GENERAL INFORMATION

1. Names of team members being evaluated: ______________________ (10-12)

____

2. School affiliation of team members: ______________________

3. Do your regular job responsibilities include opportunities to observe one or more members of this team in their work? (Check one)

Yes 97.7% (13)

No 2.3%

B. ORIENTATION AS A MONITOR

4. Did you attend the Nutrition Education Training Program (NETP) Introductory Conference in the spring of 1979? (Check one)

Yes 90.6% (14)

No 9.4%

Some of the rest of the items in this questionnaire request that you indicate the extent to which you agree or disagree with a statement. For such items, the following abbreviations will be used for response options:

SA = Atrongly Agree
A = Agree
NS = Not Sure
D = Disagree
SD = Strongly Disagree

Indicate the desired response by entering a check in the appropriate column.

	SA	A	NS	D	SD	
5. I am familiar with the Tennessee Nutrition Education Training Program, its goals and objectives.	38.1%	61.9%				(15)
6. I feel confident in my role as monitor of the activiteis of this particular team.	26.4%	64.0%	8.8%	0.8%		(16)
7. Much of my confidence as a monitor is attributable to knowledge that I gained during the Introductory Conference held in the spring.	4.0%	62.9%	20.2%	9.7%	3.2%	(17)
8. Someone else could evaluate this project more adequately than I.	3.5%	15.7%	17.4%	59.1%	4.3%	(18)

*Specify the position of such a person if you entered a check in column SA or A.

Principal	8
Nutrition Specialist or Nutrition Supervisor	8
Classroom Supervisor	1

C. BACK HOME ACTION PLAN (BHAP)

9. Do you have a copy of this team's Back Home Action Plan (BHAP)? (Check one)

Yes 93% (19)

No 7%

If so, how long have you had it?________________ (20-21)

0-1 Day	2.6%
1 Day - 1 Week	5.1%
1 Week - 1 Month	11.1%
More than 1 Month	81.2%

Indicate the desired response by entering a check in the appropriate column.

		SA	A	NS	D	SD	
10.	I understand the BHAP of this team	38.1%	61.0%	1.0%			(22)
11.	The over-all goal of this BHAP, as set forth in its initial problem statement, is a worthwhile one.	46.3%	53.7%				(23)
12.	The "Action Planning Guide for Back Home Nutrition Education Team Project" (the form in which the BHAP is contained) was a useful tool in helping these team members specify desirable outcomes and plan realistic steps to achieve these outcomes.	27.8%	67.5%	4.0%	0.8%		(24)

13. Please indicate how many Action Steps, as listed in the Back Home Action Plan (pages 1-121 and 1-122), have been completed by this team.
Mean = 5.1 Median = 5.1 Mode = 6 (21.0% of cases)
Minimum = 1 Maximum = 9 (25-26)

14. Number of Action Steps, as listed in the BHAP, have not been completed by this team?
Mean = 4.2 Median = 4.0 Mode = 4 (23.7% of cases)
Minimum = 1 Maximum = 9 (27-28)

15. Were you told which Action Step the team would be implementing during your visit? (Check one)

Yes 73.8% (29)

No 26.2%

16. Which Action Step was implemented during your visit? (Please list only the step number, as listed in pages 1-121 and 1-122 in the BHAP.)

Step Number listed	92.2%	(30-31)
No Step Listed	7.8%	

17. The Action Step which I observed achieved the expected outcome, as identified in the BHAP. (Check one)

SA	A	NS	D	SD	
44.3%	51.3%	4.1%			(32)

18. The Action Step which I observed is a good indication of the overall success of this team's BHAP. (Check one)

SA	A	NS	D	SD	
39.0%	55.3%	4.9%		0.8%	(33)

19. How would you rate the overall success of this BHAP? (Check one)

69.5%	28.9%	0.8%	0.8%	________	(34)
Very Successful	Somewhat Successful	Not Sure	Somewhat Unsuccessful	Very Unsuccessful	

20. On the basis of what you have observed, how confident are you of this rating? (Check one)

71.9%	25.0%	1.6%	1.6%	________	(35)
Very Confident	Somewhat Confident	Neither Confident nor Doubtful	Somewhat Doubtful	Very Doubtful	

D. TEAMWORK

21. Were both team members involved in the Action Step that you observed? (Check one)

Yes 88.3% (36)

No 11.7%

If not, which team member was not involved? (Check one, if applicable

n=15

Teacher	26.7%	(37)
Food Service Manager	73.3%	

22. These team members worked together effectively. (Check one)

64.0%	35.2%	0.8%	_____	_____	(38)
SA	A	NS	D	SD	

23. On the basis of what you have observed, please estimate the percentage of the effort associated with implementing this plan in its entirety which will have been done by the teacher.
Mean = 58.6 Median = 57.6 Mode = 50 (43.2% of cases)
Minimum = 25 Maximum = 95 ________% (39-40)

What percentage will have been done by the food service manager?
Mean = 41. Median = 42.2 Mode = 50 (43.2% of cases)
Minimum = 5 Maximum = 75 ________% (41-42)

E. ADDITIONAL COMMENTS

____

____

____

____

Please return this completed evaluation to:

Dr. Trudy Banta
Bureau of Educational Research and Service
212 Claxton Education Building
The University of Tennessee
Knoxville, Tennessee 37916

Data on Follow-Up Sessions

First Follow-up Sessions

Members of the NET Evaluation staff attended four of the nine Follow-up Sessions held in Fall 1979. Most NETSW participants were present for their Follow-Up Session, and every team shared success and failures in BHAP implementation with the entire group. On the basis of their observations at the sessions the evaluators concluded that most of the teams had been working conscientiously to implement their BHAPs. It appeared that (a) most team members were working well together, (b) most were achieving success in carrying out their BHAP, and (c) parents, students, and other school personnel were becoming involved in nutrition education in most of the schools represented. The Follow-up Sessions gave only a small indication of the quality of the nutrition education being presented in the schools. A few of the comments made by teachers and food service managers at these sessions indicated that the quality of the nutrition information being transmitted to students as part of the BHAP was questionable in some cases. Apparently the summer workshops did not contain sufficient nutrition content to give all participants an adequate working knowledge of nutrition concepts.

Second Follow-up Sessions

Wilma Jozwiąk

The second NETSW Follow-up Sessions were held during Spring 1980. Like the first Follow-up Sessions, the second set of nine sessions attempted to provide continuing motivation to team members for the teaching of nutrition, allowed the sharing of ideas and frustrations among teams, and provided opportunities for the workshop facilitators to offer support. Both Follow-up Sessions provided an opportunity for evaluation of NETSW effectiveness, and at the second set the evaluators administered a questionnaire (see Appendix F) to all participants in attendance.

Workshop content. It is important to discuss the results of this questionnaire in the light of certain peculiarities of the 1979 NET summer workshops. The State NET Staff in planning the original workshop format had concurred with developers of the Five-State Nutrition Training Plan that nutrition content alone was not an appropriate or necessary component of the workshops. Instead the principal focus was to be development of a team mentality between teacher/manager pairs, and development of teaching strategies rather than curriculum guides. However, the reaction of participants in the first few workshops led the facilitators to implement a nutrition content component which grew to comprise two hours of each day.

Another difference in the earlier summer workshops concerned the interpersonal skills training component. It was not until the second workshop that a facilitator with specialized experience in interpersonal skills training joined the facilitator team. Aside from the variations in nutrition content and interpersonal skills the facilitators attempted to hold content and style of presentation constant throughout the series of nine workshops.

Finally one must consider the differences between participants in the various workshops. Participants in some workshops were drawn largely from metropolitan school districts, while other workshops were composed mainly of persons from small, rural school districts. The real and perceived nutrition education needs of these differing populations understandably were divergent.

Respondents. A total of 183 persons responded to the Follow-up Questionnaire which was administered at the Second NETSW Follow-up Sessions (See Table 4.1). Of this number, three respondents were not original members of a teacher/manager team, leaving 180 original workshop participants who responded to this questionnaire. Responses to the Overall Workshop Evaluation form completed by all persons present on the last day of each workshop indicate that a total of 230 persons completed the workshops. Therefore, the 180 responses on the Second Follow-up Questionnaire represent 78% of this total. Of the 180 respondents, 91 (51%) were teachers and 89 (49%) were food service managers. All nine workshops were represented. The number of persons completing questionnaires at the Second Follow-up Session comprised the following percentages of those completing Overall Workshop Evaluations on the last day of each workshop:

Workshop One - UT Martin - 87%
Workshop Two - Jackson - 54%
Workshop Three - Memphis - 90%
Workshop Four - Columbia - 100%
Workshop Five - Murphreesboro - 82%
Workshop Six - Cookeville - 71%
Workshop Seven - Cleveland - 59%
Workshop Eight - Knoxville - 73%
Workshop Nine - Johnson City - 95%

The responses to items in the questionnaire are presented in tabular format in Appendix G. Because it was not possible to match members of teams in each workshop, totals on Questions 1 through 12 were not broken down by career.

BHAP implementation. Almost without exception (99%), the participants responded that they had used the Back Home Action Plan (BHAP) they developed during their workshop to implement nutrition education in their schools (See Table G.1.). While 39 participants (21%) used the BHAP exactly as planned, 99 (54%) changed up to one-fourth of the plan. Another 37 persons (20%) changed between one-fourth and one-half of the BHAP while using it, while only 7 (4%) modified more than one-half of the plan. All participants from the Cleveland Workshop (Workshop 7) modified their BHAP in some manner before using it.

In order to avoid duplication of responses between teammates only teacher responses are reported in Tables G.2 and G.3 for Questions 4 and 5 on parent participation.

Workshop participants apparently used differing yardsticks in measuring parent participation. While some teachers mentioned presentations to PTA meetings as occassions of parent involvement, others seem to have restricted their records to the number of planned activities involving parents in nutrition education activities in the

TABLE 4.1. WORKSHOP PARTICIPANTS COMPLETING FOLLOW-UP QUESTIONNAIRE

(QUESTIONS 1 AND 2)

Career	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5	Workshop 6	Workshop 7	Workshop 8	Workshop 9	Total # of Responses	% of Total
Teacher	7	7	11	12	12	12	9	11	10	91	50%
Food Service Manager	7	6	15	14	10	10	8	12	7	89	49%
Other	0	1	0	1	0	0	0	0	1	3	1%
Total # of Responses	14	14	26	27	22	22	17	23	18	183	100%
% of Total	8%	8%	14%	15%	12%	12%	9%	13%	10%	100%	

classroom. The percentage of parents participating was inflated by the inclusion of cases in which the total group of parents attending a PTA meeting was counted. Teacher participants reported involving parents in nutrition education activities an average of four times, with parents of approximately 51% of the students in all affected classrooms involved. Some differences among workshops were apparent. Parents were reported to be involved on relatively fewer occasions (2 and 2.3) by participants from Workshops 6 and 3, and on relatively more occasions (5.83 and 5.45) by those in Workshops 2 and 8. This is reflected in the percentage of parents involved: Workshop 3 involved only 19 percent of parents in affected classrooms, while Workshops 2 and 7 involved 69 percent and 61 percent of parents respectively. (These differences among workshops, along with others mentioned in this text, were not found to be significant when subjected to appropriate statistical tests.)

Fifty-four persons (29% of respondents) worked cooperatively with another NETSW team (See Table G.4). Ninty-six percent of those who worked cooperatively with another team found it to be a successful experience, and while 4 percent were not sure of the value of the cooperation, none felt that such cooperation was completely unsuccessful. Participants from Workshops 1 and 6 chose inter-team cooperation most frequently, averaging 71 percent and 62 percent respectively.

NETSW participants were asked to estimate the total number of persons they had involved in nutrition education since the summer workshops. Respondents estimated that 20,934 students had been reached, 5,726 parents, 1,822 teachers, and several hundred individuals in other categories, for a total of 29,703 persons (see Table G.6.).

The teacher food service manager team was perceived to be the most effective personnel combination to implement nutrition education in the school by 174 (96%) of the respondents (see Table G.7.). Only 7 persons (4%) said they would alter team composition. No clear pattern for alternate team composition emerged inthese seven responses.

NETSW interpersonal skills training. Responding to a question about the value of the interpersonal skills training component of the workshops, 128 persons (76%) agreed or agreed strongly that such training was valuable in helping them implement nutrition education in their schools (See Table G.8). Eleven percent were not sure of the value of the interpersonal skills training, while 13% (24) disagreed or disagreed strongly with the value of such training. Of these 24 persons, ten (42%) participated in Workshop 1 (Martin) and represented 72 percent of the participants in that workshop. (As mentioned earlier the composition of the facilitator team handling interpersonal skills training was altered after the first workshop.) The other fourteen negative responses were distributed over six of the eight remaining workshops.

Future plans. Only two (1%) respondents did not intend to be involved in nutrition education in SY 1980-81, while 164 (92%) intended to be moderately or very involved (See Table G.10). However, only 89 (51%) intended to seek additional funding to implement nutrition education (See Table G.9). Job status of the respondents did not discriminate between those seeking funds and those choosing not to; 48 percent of teachers and 51 percent of food service managers did not plan to apply for funding. Some differences among workshops were evident; only 17 percent, 29 percent, and 33 percent of the participants in Workshops 1, 2, and 4 respectively planned to seek additional funding, while 61 percent 62 percent and 88 percent of the participants from Workshops 8, 5, and 3 respectively said they would apply for funding. Although reasons for not seeking further funding were not solicited, size of school district appeared to be a factor: teams from systems represented at workshops in the large population centers planned to seek state funding while teams from systems taking part in workshops in smaller communities expressed less interest in obtaining State funds in the future. Perhaps smaller school districts had found that the administration of granted funds required more effort than they could justify for the monetary reward involved.

Most and least helpful training components. The Follow-up Questionnaire contained three open-ended questions. The responses of 89 teachers and 90 food service managers are discussed in the following section (See Tables G.11, G.12, and G.13). Responses from the one principal, one librarian, and one teacher who substituted for three original participants are included in the across-workshop percentages, but are excluded from individual workshop totals. Several participants provided multiple responses on one or more questions; as a result, percentages do not sum to 100% across responses for each workshop.

Question 13: "Looking back over last summer's workshop, what content or activity has been most helpful to you in implementing nutrition education in your school?"

Most participants found the workshop to have at least one helpful component; only 18 percent of the respondents failed to respond to this question. The process of writing the Back Home Action Plan (BHAP) was the component identified most frequently by both teachers (30%) and managers (19%) as being most helpful in implementing nutrition education in their schools. The opportunity to look at and use nutrition-related materials was mentioned by 26 percent teachers and 17 percent of managers, while 15 percent of teachers and 19 percent of managers found the specific nutrition content and nutrition activities presented at the workshop as most helpful. Sharing ideas and plans among teams was mentioned by 13 percent of teachers and 14 percent of managers. Finally, working together in teams was the activity valued most by 9 percent of the teachers and 13 percent of the managers. Eleven percent of teachers and 23 percent of managers chose not to respond to this question.

Each of the components mentioned as important comprised an integral part of the workshops. While participants in Workshops 6 and 9 did not consider the work on the BHAP as the most useful activity, the participants in the other workshops strongly favored the BHAP activities.

Question 14: "What summer workshop content or activity has been least helpful to you in implementing nutrition education in your school?"

Of those who responded to Question 14, only the participants in Workshop 8 failed to identify the interpersonal skills activities as the least helpful part of the workshop. Some respondents commented that a much shorter activity component on interpersonal skills might have been appropriate. Altogether, 47 percent of the teachers and 24 percent of the managers considered the interpersonal skills portion of the workshop least helpful. Additionally, too little time spent on nutrition content (2% of both teachers and managers), the writing of the BHAP (1% of teachers and 3% of managers), making an individualized lesson plan (2% of the teachers and 1% of the managers) testing and daily evaluations and reviews (1% of teachers) and having to work as a team (2% of managers) were mentioned as being least helpful. The writing of the BHAP was seen by one teacher and one manager as being an insult to the food service manager because emphasis was placed on the teachers' writing and curriculum development skills to the disadvantage of the managers. Thirty-seven percent of teachers and 64 percent of managers chose not to respond to this question.

Question 15: "What changes, if any, would you suggest in order to improve the workshop for the Summer 1980 participants?"

Responses to Question 15 were more diverse than were answers to Questions 13 and 14. However, three responses stood out. Eighteen percent of teachers and 16 percent of managers felt more time should be spent on specific nutrition content; 19 percent of teachers and 6 percent of managers felt more time should be spent developing the BHAP; and 7 percent of teachers and 8 percent of managers gave responses related to materials, including allowing more time at the workshop for materials review, providing up-to-date price lists, providing materials procurement money at the workshop, making sure ordered materials arrived at the schools on time, and offering less repetitive materials. In addition, 2 percent of both teachers and managers felt the workshop should be longer. Other scattered responses are reported in Table G.13. Forty-six percent of teachers and 62 percent of managers chose not to respond to this question.

Participants' responses to Question 14 indicated a definite dislike by some participants of the emphasis on interpersonal skill development activities in the workshops. Only 13 percent of the responses to Question 10 indicated that the interpersonal skills training was not valuable, while 35 percent of respondents mentioned that part of the workshops as least helpful on Question 14. The open-ended format of Question 14 may be responsible for the difference. Both the development of the BHAP and the nutrition-related content, including specific activities for classroom use, were given high ratings. Respondents also apparently felt that a good portion of the value of such a workshop comes from the interaction with people from other schools, sharing ideas and plans.

Summary. Almost all (99%) of the 1979 NETSW participants had used their BHAP during the 1979-80 school year. Three-fourths of the participants had been able to use their plans with very few changes.

Parents of more than half of the students of NETSW participants had been involved in nutrition education activities during the school year. Evidence of the teamwork promoted in the summer workshop was apparent in that 29 percent of those who had implemented their BHAP had worked cooperately with another NETSW team in so doing. Virtually all (96%) wo had worked cooperately with another team considered it to be a successful experience.

The 230 NETSW participants estimated that they had reached 29,703 persons with their nutrition education activities during 1979-80. This total included 20,934 students, 5,726 parents, 1,822 teachers, and several hundred individuals in other categories.

The decision to train a teacher-food service manager team to implement nutrition education in the schools apparently was a popular decision. Ninety-six percent of the summer workshop participants expressed the opinion that the teacher-food service manager team was the most effective personnel combination for implementing nutrition education. More than three-fourths of the participants considered the training in interpersonal skills which they received at the summer workshops to be of value in implementing nutrition education.

Virtually all (99%) of the NETSW participants expected to be involved in nutrition education during the school year 1980-81, but only 51 percent indicated that they would seek additional State funds for their efforts. Representatives of systems in metropolitan school systems were more likely than those in rural school districts to say that they would seek the State funding.

During the workshop follow-up phase 1979 NETSW participants looked back at the summer workshop experience and decided that the most helpful activities in which they had engaged included:

(1) writing the Back Home Action Plan,
(2) reviewing nutrition education materials,
(3) learning nutrition principles, and
(4) sharing ideas and plans in teams.

NETSW participants identified training in interpersonal skills as the least helpful summer workshop experience. They said that too little time had been spent on nutrition content and on the writing of the BHAP.

NETSW participants suggested that 1980 summer workshops could be improved by devoting more time to nutrition principles, development of the BHAP, and review of nutrition education material.

Conclusions. The overall tone of the responses to the open-ended questions was positive. However, it is likely that the participants who attended the follow-up sessions were those who became most involved in nutrition-related activities during the year. It may be that those participants who did attend the follow-up session had more negative attitudes toward the value of the workshops.

Assuming that content was held constant across workshops except for the changes mentioned at the beginning of this report, patterns of response in specific workshops suggest that individualization of content to meet the perceived needs of participants would have been appropriate. Some respondents expressed disappointment that a workshop on nutrition spent considerably more time on interpersonal skills training than on basic nutrition content. It is likely that participant satisfaction could be increased if in future workshops priorities were reversed; that is, time devoted to interpersonal skills could be reduced to two hours a day, while nutrition content could be increased to comprise the equivalent of three days of the workshop.

Sharing Sessions

Margaret P. McCabe

As part of the follow-up requirements for 1979 NETSW participants, "Sharing Sessions" were conducted back home in the local setting. Each NETSW-trained team was expected to develop at least one Sharing Session to which students, parents, teachers and other school professionals would be invited. The purpose of the session was to share information about nutrition education education with a larger audience than just the students reached in the normal course of activities carried out by the NETSW team of teacher and food service manager.

At the first Follow-up Sessions (see preceding section of this chapter) all NETSW participants in attendance were asked to fill out the questionnaire entitled "Report on Sharing Session" (see Appendix H). Forms were completed by 109 teachers (95% of the 115 teachers who completed 1979 NETSW training) and 104 food service managers (90% of the 115 managers who completed NETSW training). For those items which required the reporting of data (e.g., number in attendance, number of sessions held) only team data are reported (for the 109 teams represented); for those items which called for judgments (e.g., workshop usefulness, assessment of success) all 213 responses were considered.

Seventy-one (65.1%) of the teams had conducted only one Sharing Session by the time the first Follow-up Session was held. These Sharing Sessions had a modal duration of two hours. Sessions took place in a variety of locations, the two most common being the school lunchroom or a classroom; other locations mentioned were the library, a conference room, or the teachers' lounge.

Total attendance at the Sharing Sessions was 5195, or an average attendance per session of 34.3. While the median number of schools represented at the Sharing Sessions was 1.4, fifty-eight (53.2%) reported that only one shcool was represented. Estimates of students potentially affected by the activities of persons attending Sharing

Sessions varied substantially ($\overline{X}$ = 2214; s.d. = 6125), the median estimate being 450.

Attendance at the first Sharing Session, showing participants by position and by the NET workshop in which the organizing team participated, is presented in Table 4.2. The number of grade levels and/or subject areas represented by the teachers in attendance at each Sharing Session is presented on page 60.

TABLE 4.2. ATTENDANCE - FIRST SHARING SESSION

	UT-Martin	Jackson	Memphis	Columbia	MTSU	Cookeville	Cleveland	UT - Knoxville	Johnson City	TOTAL
Superintendents	1	-	-	1	-	-	1	1	1	5
Principals	12	8	21	10	12	22	16	12	10	123
Curriculum Specialists	4	4	5	1	8	5	6	11	-	44
Teachers	141	388	324	183	321	244	266	308	176	2351
Food Service Supervisors	5	5	8	5	9	8	12	5	2	59
Food Service Managers	11	52	57	11	47	13	72	74	31	368
Food Service Workers	-	73	-	6	15	5	10	43	44	196
Parents	33	-	160	5	353	102	154	96	154	1057
Students	19	-	80	3	170	72	522	56	26	948
Others	3	7	2	6	4	4	16	-	2	44
TOTAL	229	537	657	231	939	475	1075	606	446	5195
Number of Teams Responding	9	11	7	15	15	10	15	15	11	108
Number of Questionnaires Returned	12	22	11	29	33	20	31	30	22	210

Number of grade levels or subject areas represented by teachers in attendance	Percent of Sessions
1-3	20.1%
4-6	27.0%
7-9	45.1%
10-12	2.0%
More than 12	5.8%

The number of grade levels and/or subject areas represented by the curriculum supervisors in attendance at each session was as follows:

Number of grade levels or subject areas represented by supervisors in attendance	Percent of Sessions
K-12	10.5%
K-8	21.5%
K-5	10.5%
K-1	05.2%
First Grade	05.2%
Health	05.2%
Nutrition	10.5%
All subject areas	26.2%
None attended	05.2%

Promotion of Sharing Session. Methods used to distribute information about the Sharing Session (Item #9) were reported by respondents as follows:

Method of distributing information about Sharing Session	Percent of Respondent Sample
Ad in the newspaper	2.5%
Inservice agenda	11.0%
Invitation	2.5%
Memos	11.0%
Newsletter (School, Food Service, PTA)	14.2%

Method of Distributing Information about Sharing Session	Percent of Respondent Sample
P.A. System	17.1%
Posters	2.5%
Telephone	5.0%
Word of mouth	37.1%

Methods used to encourage attendance (Item #10) were reported as follows:

Methods of Encouraging Attendance at the Sharing Session	Percent of Respondent Sample
Frequent reminders	2.7%
Goody Boxes	2.7%
Invitations	18.0%
Posters	5.4%
Principal scheduled convenient time	2.7%
Professional growth points	18.0%
Refreshments	8.0%
Requiring attendance	17.1%
Talking to faculty	21.0%
Telephone	2.7%

Groups of people invited to attend Sharing Sessions (Item #11) were reported as follows:

Groups of people invited to attend Sharing Session	Percent of Respondent Sample
Food Service Workers	7.6%
Health Department employees	7.6%
Parents	15.3%
Students	7.6%
Superintendents	15.3%
System Supervisors	23.0%
Teachers	23.0%
4-H Supervisors	7.6%

Groups of people invited, but who did not attend (Item #12) were reported as follows:

Groups of people invited but who did not attend Sharing Session	Percent of Respondent Sample
Food Service Supervisors	23.5%
Superintendents	17.6%
Food Service Workers	5.8%
Health Department Employees	5.8%
High School Teachers	5.8%
Kindergarten Teachers	5.8%
None	5.8%
Parents	5.8%
Principals	17.6%
System Supervisors	5.8%

Format of Sharing Session. Activities pursued during the Sharing Session (Item #13) were represented as follows:

Activities pursued during Sharing Session	Percent of Respondent Sample
Displayed nutrition education materials	33.2%
Talked about nutrition education activities	29.0%
Told about NET workshop	22.8%
Discussed goals and plans	5.3%
Listened to Dairy Council Speaker	3.5%
Presented skits	3.5%
Showed a film	1.8%

Approximately 58 percent of the respondents reported using some type of educational materials such as audio-visuals, handouts, or kits during the Sharing Session. Of the materials used, 42 percent were NET - supplied.

Support of team member. Teachers' and food service managers' efforts in preparing and implementing Sharing Sessions seemed to be fairly equal (Teachers: $\bar{X}$ = 55.9; s.d. 14.8; min = 10%, max = 100%; mode = 50% (138); median = 50 (7%) (Food service managers: $\bar{X}$ = 45.1; s.d. = 14.3; min = 1%; max = 100%; mode = 50% (140); median = 49 (4%) The majority of the teachers and food service managers (98.5%) involved in preparing and implementing the Sharing Session were satisfied with the distribution of responsibility; the 1.5 percent who were not satisfied were all teachers.

Workshop usefulness and carry-over. The selection of the questionnaire which dealt with the usefulness and carry-over of activities which were part of the 1979 NET summer workshops (Item #18) is reproduced, along with summary data, in Table 4.3. Nutrition content was considered by NETSW participants to be the most useful activity of all in developing and implementing the BHAP. The time spent on interpersonal skills was also important, however, especially in planning and carrying out the Sharing Session. The problem statment and the analysis of outcomes were considered the most useful features of the BHAP. The survey of "Other Considerations" was the least helpful component of the BHAP.

Suggestions concerning workshop activities which would have benefitted respondents in preparing for Sharing Sessions (Item #19) are listed below:

Suggestions concerning activities which would have benefitted respondents in preparing for Sharing Session	Percent of Respondent Sample
More time to look at materials	57%
Demonstrations	14%
More nutrition content	14%
More time on BH activities and supplies	14%

Evaluation of Sharing Sessions. Responses to Item #20, dealing with perceptions of the relative success of the Sharing Session, did not seem congruent with other estimates of perceived success. A subsequent examination of individual questionnaires revealed that this was true in a substantial number of cases, indicating that the response format probably was a source of confusion. Since this was the case, Item #20 was excluded from consideration in this report.

TABLE 4.3. WORKSHOP USEFULNESS AND CARRY-OVER

Listed below are a number of workshop activities which were designed to assist team members in developing and implementing a "Back Home Action Plan." Indicate your assessment of the usefulness of each of these activities by entering the code number that corresponds to your opinion in Column I. In Column II place an "X" by those activities which you used in your Sharing Session.

Codes of Column I:

1 - Do not remember this activity
2 - Of no use; should be deleted from the workshop
3 - Of little use to me, but may be useful to others
4 - O moderate use to me
5 - O maximum use to me

COMPONENT	Column I Mean Usefulness (See codes Above)	Column II Also used in Sharing Session
Interpersonal skills - "Teamwork"	4.25	60
Instructional skills (writing objectives, developing instructional plans, etc.)	4.02	35
Back Home Action Plan Problem statement	4.42	56
Force field analysis	3.62	21
Survey of "Other Considerations"	3.27	20
Action steps Outcomes analysis	4.04	32
Responsibility & time analysis	3.81	26
Physical & fiscal resources analysis	3.95	24
Nutrition content	4.71	59
Other activities (please list)		

Responses to the question, "How can you account for the relative success (or lack of success) of this Sharing Session?" (Item #21) are listed below:

Responses identifying factors affecting relative success (or lack of success) of the Sharing Session	Percent of Respondent Sample
Cooperation and interest of teachers	42.4%
Support of supervisors and principals	21.2%
Lack of interest ("Some people are not interested in anything if it means work for them")	15.2%
Teamwork	9.0%
Interest of parents	6.1%
Preparation	3.0%
Quality of materials	3.0%

Responses to the question "If you were to conduct the session again, what changes, if any, would you make?" (Item #22) are listed below:

Changes if conducting the session again	Percent of Respondent Sample
Involve more students and parents	26.0%
Show more materials	20.0%
Provide more group activities	13.2%
Allow more time	6.6%
Conduct it at a later hour	6.6%
Invite more teachers to attend	6.6%
Separate from regualr faculty meetings	6.6%
Specify clearer expectations	6.6%

Responses to the question, "What Sharing Session activity do you feel was the most successful?" (Item #23) are listed below:

Most Successful Activities	Percent Respondent Sample
Materials	35.7%
Tasting party	21.4%
Handouts	14.2%
Film	14.2%
Food waste statistics	7.1%
Broken Squares	7.1%

Responses to the question, "What Sharing Session activity do you feel was the least successful?" (Item #24) are listed below:

Least Successful Activities	Percent Respondent Sample
Creating interest	28.4%
Materials not available	14.2%
More parents should attend	14.2%
Not enough time	14.2%
Same materials not effective	14.2%
Telling about workshop	14.2%

"Additional comments" did not seem to fall into a pattern of responses; for one thing many respondents failed to make remarks in this section. Below are listed several of the comments which were written in this section of the questionnaire:

> "NET has made us more aware of nutrition in our school."
>
> "Students and teachers have really utilized the Nutrition Kit!"
>
> "Teachers have asked for assistance of workshop participants in nutrition projects."

Several respondents listed nutrition education ideas they had implemented successfully in their school.

Several respondents said they found the teamwork aspects of the project valuable.

Several respondents said they had additional Sharing Sessions planned and would benefit from past experiences in planning the first session.

Several respondents said too much time was spent in the workshop "getting acquainted."

Several respondents said more nutrition information should be given in the workshops.

Several respondents said more cooperation from food service managers and principals is needed.

"Money could have been spent more wisely; some materials ordered still have not arrived."

Summary and Conclusions. Over half (65.1%) of the teams had conducted one Sharing Session by the time the first Follow-up Session was held. Maximum duration of the Sharing Sessions was two hours. These sessions took place in a variety of locations, the two most common being the school cafeteria or a classroom.

Average attendance was 34 persons; in almost half of the sessions more than one school was represented. The number of students potentially affected by the activities of persons attending Sharing Sessions varied substantially, with the median estimate being 450. Teachers and parents comprised the largest number of persons attending the sessions, with students and food service managers third and fourth, respectively. Most of the teachers represented grade levels 7-9 with 4-6 and 1-3 next in frequency of attendance. The largest number of subject area supervisors attending was in the category of those responsible for all subject areas; the largest number of grade level supervisors was in the category of those responsible for grades K-8.

Teams reported distributing information about the Sharing Session in a variety of ways, the most common being by work of mouth; announcements on the school public address system; and in school, food service, or PTA newsletters. Attendance also was encouraged in a variety of ways: talking to faculty members, sending invitations, giving professional growth points for attendance, and requiring attendance were the most common methods used. System supervisors and teachers were most often invited to attend Sharing Sessions, with parents and superintendents next in frequency of invitations. Persons most often invited but failing to attend were food service supervisors, superintendents, and system supervisors.

Activities most often pursued in Sharing Sessions were the following: (a) displaying nutrition education materials, (b) telling about nutrition education activities, (c) telling about NET summer workshops. Approximately 57.9 percent of the teams used or distributed educational materials such as audio-visuals, handouts, or kits during their presentations; it was estimated that 42.1 percent of these materials had been provided by the NET staff.

Responsibility for preparation and implementation of the Sharing Session seemed to be fairly evenly divided, with the teachers exerting a little more effort than the food service managers. Only 1.5 percent of the respondents said they were not satisfied with the distribution of responsibility; all of these were teachers.

Respondents indicated that these workshop activities were most useful in developing and implementing a "Back Home Action Plan".: (a) nutrition content; (b) interpersonal skills--the "Teamwork" approach; and (c) developing a problem statement for the BHAP. In suggesting workshop activities which would have been more effective in helping them prepare for Sharing Sessions, most respondents said they would have liked more time to look at materials. Other suggestions were: (a) demonstrations; (b) more nutrition content: (c) more time on BH activities and supplies.

Cooperation and interest of teachers and support of supervisors and principals were listed most often as factors accounting for the success of the Sharing Sessions. Lack of interest was listed as a factor contributing to a lack of success. Respondents listed the following changes they would make in conducting the Sharing Session again: Involve more students and parents; show more materials; and have more group activities. Respondents identified materials and a tasting party as the most successful sharing activity. They said it was difficult to create interest in Sharing Session Activities.

NUTRITION EDUCATION TRAINING PROGRAM
Report on Sharing Session I

Preliminary Data	Teachers	- 109
	Food Service Managers	- 103

Name______________________________ Team (Name____________________
Position____________________________ Member (Position_________________
School______________________________ (School___________________

The purpose of thes report is to provide information to Nutrition Education Training Program (NETP) personnel about

(a) what you chose to do in your first Sharing Session
(b) the problems and satisfactions you experienced in carrying out the session,
(c) who attended,
(d) how effectively your nutrition team is functioning, and
(e) your retrospective opinion of the workshop you attended in the summer.

Your thoughtful cooperation in providing this information will be appreciated.

A. GENERAL INFORMATION ABOUT SHARING SESSION

1. Number of session(s): 1 = 142 2 = 44 3 = 19 4 = 4
2. How long (in minutes) did the session(s) last? Mean = 139 Median = 120 Maximum = 450 Minimum = 2 Mode = 120 (7%)
3. Briefly describe the type of room used (e.g., classroom, lunchroom).

____

B. ACTUAL ATTENDANCE

4. Please indicate the total number of persons who attended your Sharing Session(s), according to classification.

Classification	Number in Attendance
Superintendents	5
Principals	123
Curriculum Supervisors	44
Teachers	2351
Food Service Supervisors	59

B. ACTUAL ATTENDANCE CONT.

Classification	Number in Attendance
Food Service Managers	368
Parents	1057
Students	948
Others (please list by classification)	
Food Service Workers	196
Miscellaneous	44
TOTAL	5195

5. What subject areas were represented by the curriculum supervisors who attended? (please list)

6. How many grade levels or subject areas were represented by the teachers who attended? (please list)

1-3 = 41 7-9 = 92 12 or more = 12

4-6 = 55 10-12 = 4

7. How many different shcools were represented at this Sharing Session?
Mean = 5.6 Max = 58 Mode = 1 (117)
Median = 1.4 Min = 1

8. Each person who attended this session could potentially affect the nutrition-related activities of students. Please estimate the TOTAL number of students who can POTENTIALLY be affected by ALL of the persons who attended this Sharing Session.
Mean = 2214 Max = 40,000 Mode = 300 (10)
Median = 450 Min = 1

C. PROMOTION OF SHARING SESSION

9. How did you distribute information about the Sharing Session?

C. PROMOTION OF SHARING SESSION CONT.

10. How did you encourage attendance?

____

____

11. What groups of people were invited to attend your Sharing Session?

____

12. Which groups were invited, but did not attend?

____

D. FORMAT OF SHARING SESSION

13. Briefly describe what you did at the Sharing Session.

____

____

____

14. If you used or distributed any materials (e.g., audio-visuals, hand-outs, kits) during your presentation, please list.

57.9%

Which, if any of these materials were supplied by the NET staff? Please indicate by circling NET-supplied materials.

42.1%

E. SUPPORT OF TEAM MEMBER

15. What percentage of the preparation and implementation effort associated with conducting this session was made by the teacher?

Mean = 45% Max = 100% Mode = 50% (138)
Median = 51% Min = 10% ______%

16. What percentage was made by the food service manager?

Mean = 45% Max = 100% Mode = 50% (140)
Median = 49% Min = 1% ______%

17. Were you satisfied with this distribution of responsibility?

Yes = 98.5% No = 1.5%

F. WORKSHOP USEFULNESS AND CARRY-OVER

18. Listed below are a number of workshop activities which were designed to assist team members in developing and implementing a "Back Home Action Plan." Indicate your assessment of the usefulness of each of these activities by entering the code number that corresponds to your opinion in Column I. In Column II place an "X" by those activities which you used in your Sharing Session.

Codes for Column I:

1 - Do not remember this activity
2 - Of no use; should be deleted from the workshop
3 - Of little use to me, but may be useful to others
4 - Of moderate use to me
5 - Of maximum use to me

COMPONENT	Column I Mean Usefulness (See Codes Above)	Column II "X" if also used in Sharing Session
Interpersonal skills - "Teamwork"	4.3	120
Instructional skills (writing objectives, developing instructional plans, etc.)	4.0	70
Back Home Action Plan		
Problem statement	4.4	111
Force field analysis	3.6	41
Survey of "Other Considerations"	3.3	39
Action steps		
Outcomes analysis	4.0	64
Responsibility & time analysis	3.8	51
Physical & fiscal resources analysis	3.9	48
Nutrition content	4.7	117
Other activities (please list)		

19. Please list any specific workshop activities that would have been more effective in preparing you for this Sharing Session.

G. EVALUATION OF SHARING SESSION

20. In terms of your expectations, how successful do you feel this session was? (Circle one)

11%	50%	1%	39%	45%
Very Unsuccessful	Somewhat Unsuccessful	NO Opinion	Somewhat Successful	Very Successful

21. Briefly, how can you account for the relative success (or lack of success) of this Sharing Session?

____

____

____

22. If you were to conduct the session again, what changes, if any, would you make?

____

____

23. What Sharing Session activity do you feel was the most successful?

____

____

24. What Sharing Session activity do you feel was the least successful?

____

____

H. ADDITIONAL COMMENTS

____

____

____

Please return this completed report to:

Dr. Trudy Banta
Bureau of Educational Research and Service
212 Claxton Education Building
The University of Tennessee
Knoxville, Tennessee 37916

Summary

Data collected by the evaluators in the NETSW follow-up phase (i.e., during the 1979-80 School year) provided evidence of the overall effectiveness of the NET training program:

- The Introductory Conference held in Spring 1979 provided two-thirds of the project monitors with the information they needed to do their work as monitors of 1979 NETSW teams.
- Virtually all monitors received a copy of the Back Home Action Plan from the NETSW team they were to monitor and knew what BHAP step they would be observing when they paid their monitoring visit.
- According to project monitors (system level food service and curriculum supervisors), 98 percent of the BHAPs were successfully implemented by the NETSW teams.
- Monitors said 99 percent of the teams worked together effectively.

- Virtually all (99%) of the 1979 NETSW participants reported that they had used their BHAP during the 1979-80 school year.
- Parents of more than half of the students of the teacher members of NETSW teams were involved in nutrition education activities during 1979-80.
- NETSW participants provided nutrition education to an estimated 29,700 persons in Tennessee during 1979-80.
- Almost all (96%) NETSW participants considered the teacher-food service manager to be the most effective personnel combination for implementing nutrition education.
- While 99 percent of NETSW participants expected to be involved in nutrition education during 1980-81, only 51 percent said they would seek additional State funding for their efforts.
- The most helpful workshop activities, according to 1979 NETSW participants, were:
  - (1) writing the BHAP,
  - (2) reviewing nutrition education materials,
  - (3) learning nutrition principles, and
  - (4) sharing ideas and plans in teams.
- Training in interpersonal skills was considered the least helpful workshop experience.
- In sharing nutrition education with parents and school professionals, NETSW participants felt that their most successful techniques were tasting parties and showing materials.

CHAPTER FIVE

ASSESSMENT OF MATERIALS

Subgoal 3 of the 1980 NET State Plan pledged to "provide teachers with accurate and current information about nutrition and human health factors affecting food availability and acceptability." Specific objectives subsumed by Subgoal 3 included plans to:

1. distribute a newsletter (the "Goody Bag") to all elementary school teachers in the State,
2. increase the number of nutrition education materials available for distribution through the State Media Center,
3. distribute a nutrition content kit (the "Goody Box") to each school system in the State, and
4. make use of print media to publicize the NET program.

This chapter of the evaluation report contains:

1. two types of evaluative data--user satisfaction and a content analysis--concerning the "Goody Bag",
2. data from the State Media Center concerning usage of the nutrition education materials housed there,
3. three types of evaluative data--usage, nutrition content analysis, and readability analysis--on materials included in the "Goody Box", and
4. an assessment of newspaper and journal coverage of Tennessee NET activities.

"Goody Bag" User Satisfaction
SY 1979-80

Wilma Jozwiak

The "Goody Bag," a nutrition information newsletter produced by the State NET Staff, was distributed to elementary teachers in every school system in Tennessee in an effort to increase awareness of nutritional concerns. In order to assess user satisfaction with the publication, the staff included a 4-question response form in the Spring 1980 issue. Although the requested return date was May 18, only 21 responses and 3 unsolicited letters had been received by June 1. Due to the poor response rate, these data can only be considered representative of the opinions of those who chose to respond. The respondents generally expressed very favorable attitudes toward the publication. The following tables provide a summary of the responses to the four questions in the survey format.

Question #1: How was the "Goody Bag" useful to you? (Check all that apply.)

Response	# Respondents Choosing Response
It increased my knowledge of Tennessee's Nutrition Education and Training Program	14
It increased my knowledge of resources to use in teaching nutrition	15
I used the information in teaching nutrition	10
It was of little or no use to me	1
I rarely read the "Goody Bag"	0
Other (Please specify) Response: "Of no use!"	1

Question #2: How could the "Goody Bag" be improved? (Check all that apply.)

Response	# Respondents Choosing Response
It should include more facts about nutrition	7
It should include more ideas about nutrition activities for students	11
It should include more information on resources	10
It should include more news from schools about nutrition education programs	0
It should include more news about Tennessee's Nutrition Education Training Program	3
It should be lengthened	9

Question #2: (cont'd.)

Response	# Respondents Choosing Response
It should be shortened	0
Other (Please specify)	7
Responses: "Arrive prior to date or holiday discussed" "More health recipes--perhaps one in each issue" "More public awareness about the 'Goody Bag'" "Very Good" "As is--it is great!" "Is nice" "Special food rules and how to get a balanced meal"	

Question 3, an open-ended question, was stated: "What other changes, if any, would you make in the "Goody Bag"? Six respondents answered this question. Four wished to have more teaching activities and resources included in the newsletter. One respondent suggested an idea sharing corner in the newsletter, while the sixth respondent answering this question wanted more information relating to Orthodox Jewish food rules.

Question 4 asked for other comments, and most respondents took the opportunity to provide an answer. Although one respondent questioned the value of the entire publication, the rest of the comments indicated satisfaction or suggested further additions to the newsletter. The three unsolicited letters contained positive remarks about the newsletter content. One contained a complaint about failure to receive the newsletter and a request to be put back on the mailing list.

As stated previously, any conclusions based on this very small sample of users must be treated with extreme caution. However, the readers who chose to respond to this survey expressed very positive reactions to the newsletter. The most frequently suggested change was the inclusion of more instructional aids and activities for use in teaching nutrition. Respondents' concern over delivery of the newsletter in time to use activities planned for special dates or holidays should be taken into consideration when planning future issues.

It is hoped that any future evaluations of the "Goody Bag" will generate a higher response rate. Providing respondents with a premium of some sort--perhaps a short activity packet--would be likely to increase the number of persons who respond. Providing a premium for each response has potential for biasing results; however, a return as small as the one reported here is of little value in assessing the "typical" reader's evaluation of the newsletter.

Evaluation of "Goody Bag" Content

Dr. Jean Skinner

General comments:

1. A well-done publication*- accurate in nutrition information and useful for classroom teachers, K-6.

2. A similar publication with content appropriate for teachers 7-12 would be helpful. The issues received were definitely aimed at K-6 teachers (as intended).

3. A monthly publication has the added advantage of reminding teachers about nutrition education.

*See individual issues for minor comments.

Girth Guidance

may also be dangerous

With the holiday season behind us, and the new year before, thoughts turn to resolutions. This is an excellent time to reduce any extra pounds acquired. Start working toward a slim summer appearance!

Here are some tips to help you:

1. *If you have more than 10 lbs. to lose, consult your doctor before starting a diet.*

2. *Analyze when and why you are eating.* Keep a food diary for a week at your *normal* intake. Record what you eat, how much, when, and what triggered the eating. (Hunger, habit, being with friends who were eating, tension and boredom are common reasons.) With this recognition, it is easier to take steps to short-circuit the problem-makers.

Recognize that in order to lose weight, the daily caloric intake must be less than what the body needs for daily energy. You must make the body use some of its stored fat.

1 lb. of body fat = 3,500 extra Calories

3. *Stay within a daily caloric range that encourages regular weight loss.*

Usually recommended
for women: 1000-1200 Calories/day
for men: 1500-1800 Calories/day

These levels permit the minimum number of servings from the ~~Basic~~ Four Food Groups and usually provide enough food to make the diet "livable".

It is very important that the body continue to get all the nutrients it needs hence using the Basic 4 recommendations (in low-calorie choices) is encouraged. If an unbalanced diet is followed, a multi-vitamin-mineral tablet may be needed.

4. *Aim at a life-style change in your exercise and eating habits.* You do not want to get into the "yo-yo syndrome" of losing weight only to regain it quickly.

Not "Basic 4"
Don't suggest "unbalanced diet"

5. *Work to de-calorize your intake.*
Examples: Instead of drinking a 12-oz. Coke (145 kcal.), drink iced tea ~~with artificial sweetener~~, black coffee, or water (0 kcal.)

Drink skim or 1% low fat milk instead of whole milk (90 kcal. & 110 kcal. vs. 160).

Omit the Danish pastry (275 kcal.) and doughnuts (125 kcal.) from coffee breaks.

Use low-calorie salad dressings, or omit entirely.

Choose broiled, baked or roasted lean meats, fish and poultry instead of fried or those in gravies and sauces.

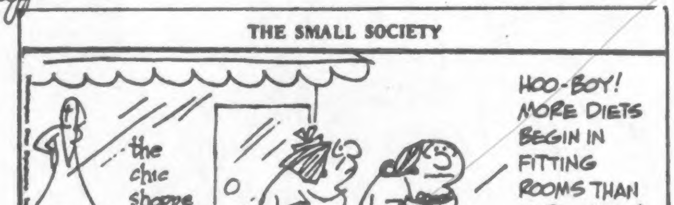
If you crave sweets, try fresh fruits! to satisfy it with 1 level teaspoon of brown sugar (17 kcal.) instead of a high calorie dessert.

6. *Begin a regular exercise routine with your doctor's approval.* Brisk daily walking is the best form of exercise for many overweight people. Consciously increase your physical activity. Work into the exercise slowly.

7. *Set realistic goals and reward yourself (but not with food).* Example: Allow yourself ½ hour/day for a favorite hobby when you've stuck to your diet. If you like plants, buy yourself a new plant when you have reached your week's goal for weight loss. Select long range goals and rewards, BUT remember smaller, encouraging reinforcers. You deserve them! Good

Coming in February:
Nutrition and Heart Health

Authorization number: 1114 No. of copies printed: 30,000 "This public document was promulgated at a cost of $0.02 per copy to disseminate sound nutrition education to elementary teachers."


THE SMALL SOCIETY
the chic shoppe
HOO-BOY! MORE DIETS BEGIN IN FITTING ROOMS THAN IN DOCTORS' OFFICES-
12-5 BRICKMAN

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An interesting activity, but so is watching growth of any vegetables. So many that sprouts don't fall in category of "magical foods" so some health enthusiasts believe.

NUTRI DUCK
DUC
EVERYTHING YOU EVER WANTED TO KNOW ABOUT NUTRITION

Nutri-Duck presents nutrition information to elementary students in Memphis. Nutri-Duck is *Helen Burke, Nutrition Resource Specialist for Memphis City Schools.*

Sprouting References

Creative Food Experiences for Children.
Mary T. Goodwin and Gerry Pollen. Center for Science in the Public Interest, 1755 S Street, N.W., Washington, D.C. 20009. 1974. $4.50 paper. Page 35. A resource book well worth the cost.

Laurel's Kitchen—A Handbook for Vegetarian Cookery and Nutrition
Laurel Robertson et al. Nilgiri Press, Box 477, Petaluma, California 94952. $15.00 hardcover; $3.95 paper. Copyright 1976. Pages 131-136. Excellent reference on vegetarian cookery.

***From* Laurel's Kitchen** *(Reprinted with permission)*

"When a seed sprouts, its food value skyrockets. Vitamin C materializes as if by magic, and other nutrients increase several times over. The starches turn to sugar, so the flavor is quite sweet."

"The following method works, with some adaptations, for sprouting all kinds of things: mung beans, garbanzos (chickpeas), whole dried peas, lentils, alfalfa seeds, wheat berries, and for a piquant addition to salads, mustard seeds (just a few."

"1. Soak 1 tablespoon of seeds or 1/3 cup of beans in 1 quart of tepid water overnight. Be sure the seeds have not been chemically treated for planting. Your health food store is probably the best source of seeds for sprouting. This is the only time sprouts should actually soak, for if they are not completely drained hereafter, they will ferment unpleasantly.

2. On the second day, rinse the seeds thoroughly in tepid water and drain. Place them in a quart jar and cover it with a dampened washcloth or piece of cheesecloth. Fasten with a rubber band and store in a dark cupboard.

3. Continue to rinse the seeds or beans twice each day—three times if the weather is hot or you live in a dry climate. Make sure excess moisture is drained off each time.

4 By the third day, if it's seeds you're sprouting, all the seeds which aren't going to sprout will sink to the bottom of the container when you fill it with rinse water. The growing sprouts will rise to the top and can be poured off into a colander, leaving the 'dead' seeds behind to be thrown away.

5. Sprouted mung beans and lentils are ready in just three days. So are soybeans. Wheat berries take just two days to reach their peak nutritional value, while alfalfa seeds take 4-5 days.

When your sprouts are ready, place them in cold water briefly and disentangle them for easier use. Sprouted alfalfa seeds shed their 'cases' at this point. The cases will float above the sprouts and can be skimmed off easily. Store sprouts refrigerated in a covered container. To increase their nutritional value somewhat, and certainly their eye appeal, place them in the sun to green for a few hours before refrigerating.

6. In hot weather, be sure to keep growing sprouts in a relatively cool place and keep the towel damp. They grow faster in hot weather so don't fail to rinse them regularly.

7. Be sure to sterilize the container before starting new seeds. A bleach solution will take care of it.

Mung beans, soybeans and alfalfa sprout easily. Alfalfa sprouts are probably the most popular. They are especially delicate . . . .lovely for salads and sandwiches. Soybeans mold very easily so sort out the non-sprouters as soon as possible. Don't expect a long "tail" to develop. "Sprouted soybeans should not be eaten raw, as they contain a protein-inhibiting enzyme that heat destroys. Steamed for 5 minutes or so they have a nutty savor and crunch that graces any mixed vegetable dish very nicely."

Classroom Activities: Have students observe changes daily—changes in size, color, hardness or softness, and new shoots.

Authorization No. 1114; 30,000 copies monthly. "This public document was promulgated at a cost of $0.02 per copy to disseminate sound nutrition education to elementary teachers."

Monthly Nutrition Newsletter for Elementary Teachers

The Goody Bag

Published by The Nutrition Education & Training Program/Tennessee Department of Education

VOLUME 2, NO. 1 **SEPTEMBER, 1979**

School's begun! With this issue, the focus is BREAKFAST!

Students need to start the day with fuel for the learning tasks and physical activities before them. Studies have repeatedly shown a direct link between breakfast and learning. Children who skip breakfast have been shown to be apathetic and listless compared to their classmates who have had a morning meal.

Surveys consistently reveal a significant number of students who are not eating breakfast. A study by the Department of Health, Education and Welfare indicates that as many as one out of four children goes to school without breakfast. We urge you to conduct your own school or classroom survey.

If need is indicated and there is not a School Breakfast Program in your school, discuss the possibility of starting one with your principal and/or superintendent. School breakfast is an important **option** for children who do not have access to breakfast at home. For information regarding starting a School Breakfast Program, contact your school food service manager or the State Department of Education.

BREAKFAST SURVEY FORM

SYSTEM: **SCHOOL NAME:** **GRADE:**

TEACHER'S NAME: **I am a:** *(please circle)* **BOY** **GIRL**

Please check the best answer:

1. Did you have some food this morning? Yes ______ No ______

2. Do you usually eat food in the morning? Yes ______ No ______
   If you usually eat food in the morning, where do you usually eat?
   - ______ at home
   - ______ vending machine selection
   - ______ in the school breakfast program
   - ______ other *(please specify)*
   - ______ bought breakfast on the way to school

3. If you do not eat a morning meal regularly, why not?
   - ______ do not have time
   - ______ nobody to prepare it
   - ______ I am on a diet
   - ______ not hungry
   - ______ do not feel good
   - ______ food not available
   - ______ can't eat that early in the morning
   - ______ don't like foods served
   - ______ other *(please specify)*

4. Which of the following foods are included in your morning meal?
   - ______ fruit or juice
   - ______ coffee
   - ______ butter or spreads
   - ______ leftovers ✓
   - ______ meat
   - ______ pancakes or waffles
   - ______ bread, toast, rolls, biscuits
   - ______ eggs
   - ______ sandwiches ✓
   - ______ cereal with milk
   - ______ "Instant Breakfast" type beverage
   - ______ other beverage
   - ______ milk or cocoa
   - ______ soup ✓
   - ______ other foods

5. Describe your normal breakfast:

6. What is your favorite breakfast?

– good choices to include – we tend to stereotype "breakfast foods"

A summary of your survey findings would be appreciated. Send to:

Helen Minns
Bldg 309, 11th Ave
Smyrna, TN 37167

[illegible]
[illegible]

Taken from U.S.D.A. Home and Garden Bulletin No. 72
Revised April 1977

TABLE 2—NUTRITIVE VALUES OF THE EDIBLE PART OF FOODS -Continued

[Dashes (—) denote lack of reliable data for a constituent believed to be present in measurable amount]

Legumes (dry), Nuts, Seeds; Related Products

Item No.	Foods, approximate measures, units, and weight (edible part unless footnotes indicate otherwise)		Water	Food energy	Protein	Fat	Fatty Acids: Saturated (total)	Fatty Acids: Unsaturated: Oleic	Fatty Acids: Unsaturated: Linoleic	Carbohydrate	Calcium	Phosphorus	Iron	Potassium	Vitamin A value	Thiamin	Riboflavin	Niacin	Ascorbic acid
(A)	(B)		(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)
		Grams	Percent	Calories	Grams	Grams	Grams	Grams	Grams	Grams	Milligrams	Milligrams	Milligrams	Milligrams	International units	Milligrams	Milligrams	Milligrams	Milligrams
527	Pumpkin and squash kernels, dry, hulled	1 cup.....140	4	775	41	65	11.8	23.5	27.5	21	71	1,602	15.7	1,386	100	.34	.27	3.4	—
[illegible]	Pumpkin, canned	1 cup.....245	90	80	2	1	—	—	—	19	61	64	1.0	588	15,680	.07	.12	1.5	12

BREAKFAST UPDATE

Would have been better ~~[illegible]~~ to include this with Sept. inform

In the September issue of the "Goody Bag," the entire newsletter was devoted to breakfast and its importance. This month, the N.E.T. staff has compiled a brief list of breakfast references that can be used by the teacher, food service manager or parents.

BOOKS:

for very young children

1. ***George Washington's Breakfast.*** Jean Fitz. 1969. $3.86. Coward-McCann, Inc., 200 Madison Avenue, New York, N.Y. (Primary—Grades 3-6). A fictional children's story about what George Washington ate for breakfast. A good trigger for discussions regarding importance of breaking the fast foods in history and specific factors which influence nutrition behavior. (Acknowledgements critiqued by Kentucky Nutrition Education "Review Board" from Kentucky Nutrition Education and Training Manual, 1978.)
2. ***Green Eggs and Ham.*** Dr. Seuss. 1960. 9- $2.50. Random House, 201 E. 50th Street, New York, N.Y. (Primary). Sam is not about to eat green eggs and ham anywhere or with anyone. Then he tries them and likes them and decides he can eat them anywhere with anyone.
3. ***Rupert the Tired Rabbit.*** R. K. Schaffner and R. Stola. 1978. 28 pp. $.75. Dandelion, 4165 Fowler Drive, Bellbrook, OH 45305. A story for young children about two animal friends. The need for eating a good breakfast to prevent energy lag is stressed.
4. ***Jellybeans for Breakfast.*** Miriam Young. New York. Parents' Magazine Press. 1968. $3.95. (K-First Grade). Two children pretend that they can do and eat anything they like. This fantasy involves foods a child would ideally like to eat, but when one thinks about them, they become distasteful—like "jellybeans for breakfast."

FILMS & FILMSTRIPS:

1. ***"Why Doesn't Cathy Eat Breakfast?"*** (Grades 6-9) Dairy Council, Inc. No. F614. 1974. film/16mm/color/ sound/4 min./teacher guide. Loan. Purchase. $32.00. The object of this trigger film is to motivate students to discuss the reasons why Cathy and others skip breakfast.

Dairy Council, Inc., Representatives

Knoxville

[illegible]
7525 Kingston Pike
Knoxville, TN 37919
(615) 588-7618

Bristol

[illegible]
800 Anderson St., P.O. Box 3794
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Paducah, KY 42001
(502) 554-0469
Northwest TN (Obion, Weakley, Henry, Dyer, Gibson, Carroll, Crockett)

[illegible]
3035 Directors Row, Suite 426
Memphis, TN 38131
(901) 346-5580
Southwest TN (Shelby, Tipton, Lauderdale, Haywood, Madison, Fayette, Hardeman)

2. ***"That's Breakfast."*** (K-5). Color. 7 min. Film Library, 31 Roberts Hall, Cornell University, Ithaca, N.Y. 14850. Breakfast is an important meal. You don't need to limit yourself to the "normal" breakfast of bacon and eggs. A wide variety of foods will provide the needed nutrition. Presented using the muppets and songs. Rental Fee $3.50.
3. ***"Break the Fast"*** from the set *"Nutrition Filmstrips for Children."* The Polished Apple, 3742 Seahorn Drive, Malibu, CA 90265. (Grades K-4). $71.25 complete set (3 filmstrips). Six-year-old Tommy and his family all are breakfast skippers. They learn that breakfast can include many of their favorite foods and that eating breakfast goes hand in hand with the way they look and feel.

KITS:

1. ***"Unhappy Alligator."*** (Grades 1-5). Free. Florida Department of Citrus, School Marketing Expansion Department, Box 148, Lakeland, Florida 33802. Contains all the materials needed to produce a puppet show, including the script which tells the story of an unhappy alligator who is made happy by having a good breakfast every morning. It includes a lesson plan and related discussion topics for teachers to follow.
2. ***"Energize at Sunrise/Energy 365."*** (K-6). Kellogg's Breakfast Unit and Game, P. O. Box 9744, St. Paul, MN 55197. The "Energize at Sunrise" nutrition education unit and the "Energy 365" breakfast game are designed to introduce children in grades K-6 to concepts of basic nutrition. "Energize at Sunrise" is a 1-2 week program and includes a teacher's guide with nutrition information and lesson plans, a four-color overhead transparency and 13 spirit masters. "Energy 365" includes a large four-color poster and scoreboard along with a teacher's guide. Cost $2.00 (6 weeks delivery).

TEACHING AIDS: *(Florida Department of Citrus, School Marketing Expansion Department, Box 148, Lakeland, Florida 33802)*

1. ***Every Day We Get Up*** (K)—Talks about why everyone needs breakfast. Use booklet as an art activity.
2. ***Let's Learn About Breakfast*** (Grades 1-3)
3. ***Have a Nice Day*** (Grades 4-6)—Talks about why everyone needs breakfast.

POSTERS:

1. Breakfast Energy—2. Big Smile Breakfast—3. Big Muscles Breakfast—4. Nutrition All Day, Every Day—5. Breakfast Mobile

***

BREAKFAST RECIPE

Portable Apple & Cheese Pleasers
Children will love these high-protein breakfast cookies.
(Notice that only 1/3 cup of brown sugar is needed)

- 3/4 cup all-purpose flour
- 2/3 cup butter or margarine, softened
- 1/3 c. firmly packed brown sugar
- 1 egg
- 1 teaspoon vanilla
- 1/2 teaspoon cinnamon
- 1/2 teaspoon baking powder
- 1/2 teaspoon salt
- 1-1/2 cups oats (quick or old fashioned, uncooked)
- 1 cup (4 oz.) shredded cheddar cheese
- 3/4 cup raisins
- 1 cup chopped apple

Combine flour, butter, sugar, egg, vanilla, cinnamon, baking powder and salt in large bowl; mix well. Add oats, cheese and raisins; mix well. Stir in apple. Drop by heaping tablespoons onto ungreased cookie sheet; bake in preheated moderate oven (375°F.) 15 minutes or until golden brown. Store in tightly covered container in refrigerator or in loosely covered container at room temperature. Makes about 2 dozen cookies.

Taken from: *The Quaker Oats Wholegrain Cookbook, Quaker Oats Company, Merchandise Mart Plaza, Chicago, IL 60654, 63 pp. Free.*

1979-80 State Media Center Procurement and Usage Report for Nutrition Education Materials

Wilma Jozwiak

In addition to the Goody Box, a packaged kit of nutrition education materials made available by NET to each school system in Tennessee that requested it, nutrition education materials also were made available by the Tennessee Department of Education Educational Media Center. These materials were available on a 3-week loan basis to State NET personnel, State Department curriculum specialists, and local school food service supervisors and managers. The NET Project added five copies each of 15 films, all of which were 16mm color films on nutrition-related topics. In addition, 61 slide or filmstrip kits and 103 other materials including books, poster sets and game or activity packets were added to the materials center by the NET Project. These materials were added to other nutrition materials already available to Tennessee school systems.

Usage data for materials available through the State Media Center were tabulated by Center personnel. School systems were not required to submit data about the number of teachers who actually used each item, nor the number of students who were affected by the use of the materials. As a result, the figures reported in this document reflect the number of times the material was checked out to a school system or to an educational specialist. There is no way to determine the numbers of students that might have been affected by the use of these materials. Usage reports would be much more informative if this information were included. It is recommended that the Materials Center be provided with forms requiring this data that can be attached to each item, similar to a library card. The data then can be summarized at the end of each school year.

Some materials seemed to be seriously under-utilized. If these materials are considered appropriate for inclusion in the Media Center nutrition material collection, an attempt should be made to publicize their existence. Perhaps a brief materials review column might be added to the "Goody Bag" nutrition newsletter.

Films

Title	Number of Times Checked Out
The All American Meal	28
The Big Dinner Table	33
Bread	17
Calories, Enough is Enough	12
The Consumer in the Market Place	20
Dental Health: How and Why	19
Dr. Seuss on the Loose	42
Eat, Drink and Be Wary	24
The Eating Feel Good Movie	34
Eating on the Run	37
Exercise and Physical Fitness	23
The Eye of the Supervisor	0
Fitness Challenge	0
Food and Growth	37
Food, Energy and You	28
Food for a Modern World	14
Food for Life	16
Food Labeling	13
Food Store	9
Food that Builds Good Health	29
Foods: Fads and Facts	27
Foods from Grains	9
For Tomorrow We Shall Diet	21
Good Eating Habits	11
Great Expectations	10
Health: Toothache of the Clown	35
Hemo the Magnificent	38
How a Hamburger Turns into You	38
Human Body: Excretory System	21
Human Body: Nutrition and Metabolism	17
Hungry World	10
Let's Eat Food	35
Look Before You Eat	24

Films

Title	Number of Times Checked Out
Mechanics of Life: Blood and Circulation	30
Nutrition: Fueling the Human Machine	18
Nutritional Quackery	17
The Real Talking Singing Action Movie About Nutrition	14
Run Dick Run Jane	17
Snacks Count Too	17
Soopergoop	36
Stone Soup	13
Story of Rice	3
The Structure of Protein	11
Tissues of the Human Body	25
Vegetables for All Seasons	10
Vegetable Preparation	2
What's Good to Eat	18
Wheat Farmer	1
You Are What You Eat	37
Your Table Manners	15

Print and Multimedia Materials	As of June '80
Framework for Nutrition Education; a Guide for Elementary Teachers Grades K-6.	1
Watch Your Mouth.	Unknown
The Incredible Edible Egg; a Multi-Media Program for High School Students.	6
The Incredible Edible Out-of-This-World Egg; a Multi-Media Program for Students in Grades 3-6.	3
The Art of Getting Kids to Eat.	5
Cooking and Eating with Children; a Way to Learn	0
Balanced Meals; Instructor's Teaching Guide.	1
Care for Two: Baby and You.	1
Choices for a Lifetime.	4
Project A.M. Today's Foods and Breakfast; a Multi-Media Kit for Intermediate Levels.	3
Today's Choices; for Classes Concerned With Food, Health and Consumer Education.	4
A Child's Garden of Eating; a Weight Watcher's Nutrition Education Program for Use in Kindergarten and Grade 1.	1
Concept Builders: Foods.	2
How Children Learn About Food	1
How Children Learn About Food	1
Menu Planning for Child Care Programs.	7
Nutrition in Action for the Child; a Colored Slide Presentation in Conjunction with a Guide for Teachers: Learning Nutrition Through Discovery.	1
Nutrition Labeling: What's In It for You?	3
A Teacher's Guide to: Learning Nutrition Through Discovery.	2
Buy and Buy; a Health Education Experience for 9-13 Years Olds Focusing on Food . . . .a Consumer Issue.	4
Fad Dieting?; a Portfolio of Resource Materials.	1
Comparison Shop with Unit Pricing.	4
Trash Tells a Tale.	0
Yardsticks for Nutrition.	2
Big Ideas in Nutrition Education: Consumer Program.	2
Big Ideas in Nutrition Education: Teenage Program.	1
Big Ideas in Nutrition Education and How to Teach Them: Balanced Meals: Primary.	2
Big Ideas in Nutrition and How to Teach Them: Daily Food Choices - Upper Elementary.	Unknown
Little Ideas; an Early Childhood Nutrition Education Program.	0

Print and Multimedia Materials	As of June '80
Fun With Food Facts; a Teacher's Guide for Nutrition Education Kindergarten - Third Grade.	2
Diet Posters.	4
Discovering New Protein Foods.	2
Eat Balanced Meals.	1
Exercise Posters.	4
The Exeter Story.	2
The Mother-Child Cookbook.	4
Fling Kit: British	1
Fling Kit: Chinese.	1
Fling Kit: Christmas.	0
Fling Kit: Chuck Wagon.	1
Fling Kit: Circus.	2
Fling Kit: Easter.	1
Fling Kit: Fall.	2
Fling Kit: French.	2
Fling Kit: German.	0
Fling Kit: Greek.	0
Fling Kit: Halloween.	2
Fling Kit: Hawaiian.	0
Fling Kit: International.	0
Fling Kit: Italian.	0
Fling Kit: Japanese.	1
Fling Kit: Mexican.	3
Fling Kit: Patriotic.	1
Fling Kit: Roaring 20s.	0
Fling Kit: Safari.	1
Fling Kit: Spring.	0
Fling Kit: St. Patricks.	0
Fling Kit: Valentine.	0
Food and Nutrition Teaching Pictures.	2
Food for Life: The Basic Four.	3
Food to Grow On; Nutrition from Newborn through Teens.	1
Foods, Fads and Fallacies.	5
Foodway to Follow.	1

Print and Multimedia Materials	As of June '80
For Your Good Health Teaching Pictures.	1
The Freeloaders.	1
A Guide for Nutra Lunches and Natural Foods.	1
Good Loser; the Weight Control Game.	3
Good Sense & Good Foods.	4
How Food Becomes You.	1
The Increasing Importance of Grain Foods.	3
Inside My Mom.	Unknown
Food: Where Nutrition, Politics and Culture Meet.	2
The Taming of the C.A.N.D.Y. Monster.	2
Teaching Nutrition by Teams, Games and Tournaments.	1
Lunchroom Learning.	5
Focus on Nutrition; a Teacher's Handbook for Nutrition Education, Grades Kindergarten Through Six.	1
Focus on Nutrition; a Teacher's Handbook for Nutrition Education, Grades Seven Through Twelve.	1
Nutrition Education: A Cooperative Effort; Leader Guide.	1
Nutrition Education: A Cooperative Effort; Teacher Guide K-6.	1
Moving to Metric.	1
Health Education; Nutrition and Food.	1
Focus on Health and Nutrition; a Comprehensive Health Education Curriculum Guide for Grades 9-12.	1
Food. . .Your Choice Level 1; a Nutrition Learning System.	6
Food. . .Your Choice Level 2; A Nutrition Learning System.	7
Food. . .Your Choice Level 3; A Nutrition Learning System.	7
Label It Nutrition; an Educational Program on Nutrition Labeling.	3
Nutrition Source Book.	1
Toothtown U.S.A.	6
U.S. RDA Comparison Cards.	
National Educational Media Series.	
Avoiding Burns in the Kitchen.	3
Avoiding Cuts & Strains in the Kitchen.	4
Avoiding Falls in the Kitchen.	4
Cooking Vegetables.	4
Efficient Service in Cafeterias.	5
How to Use Recipes.	6

Print and Multimedia Materials	As of June '80
Kitchen Fires - Prevention and Control.	4
Portion Control: Everyone's Responsibility.	3
Roasting Meats & Poultry.	2
Storage & Receiving Procedures.	4
Successful Deep Fat Frying.	5
Waste Prevention.	1
Audiovisuals for Nutrition Education.	1
F.O.O.D. for Thought: Focus on Optimal Development of the Child; Intermediate Level.	2
Nutes to You; Nuteland School Lunchroom Kit.	4
Nuteland School Room Kit	3
Nutrients for All Ages: Calcium.	Not seen
Nutrients for All Ages: Iron.	Unknown
Index of Nutrition Education Materials.	4
Nutrition Set.	1
Leader's Handbook for a Nutrition and Food Course - Parent Education in Nutrition and Food.	1
HEAD START. Nutrition Instructor's Guide for Training Leaders - Parent Education in Nutrition and Food. Also Food Buying Guide (See USDA Item 735).	1
Nutrition Staff Training Programs.	1
Teenage Dieting - Harmful or Helpful? (Pennsylvania Curriculum Series on Nutrition).	1
Nutrition Education in a Changing World: Preschool Unit in Nutrition.	2
Nutrition Education in a Changing World: A User's Guide; Your Body and Nutrients.	1
Eclipse of the Blue Moon Foods.	3
Eclipse of the Blue Moon Foods; a Guide to Teaching Food Education.	3
The Physiology of Exercise.	Unknown
Project A.M. Today's Foods and Breakfast; a Multi-Media Kit for Intermediate Levels.	Unknown
Protecting the Public.	1
Nutrition and You.	
Nutrition and You.	Unknown
Pencil and Paper Fun to Teach Nutrition.	
School Menu Planning Kit.	Unknown
A Series of Nutrition Education Filmstrips for the Primary Grades: (Break the Fast, George Gorge and Nicky Persnicky and the Nutrient Express)	Unknown

Print and Multimedia Materials	As of June '80
Shaping Up: Nutrition Education.	Unknown
Discovering Vegetable Treasures.	Unknown
Food for Sport.	Unknown
The Snacking Mouse.	Unknown
Breakfast Program.	Unknown
Focus on Food: Nutrition Education for Tennessee's Children.	2
Health Scope and Sequence K-12.	Unknown
A Trip to the Farm Teaching Pictures.	1
Type "A" Menu Success Story.	5
Food Buying Guide and Recipes; Project Head Start Community Action Program.	1
Nutrition Education in Child Care Centers.	3
The Real Truth About School Lunch.	0
The School Lunch Bunch-Nutrition in Today's Schools.	2
Food for Youth Study Guide.	Unknown
Nutrition Program Series for Show n'Tell Phone Viewer.	Unknown
Baby's First Year.	Unknown
Breakfast 4-4-3-2-Way.	Unknown
Changing Food Needs of the Family.	Unknown
Feeding Young Children.	Unknown
Food for Older Folks.	Unknown
Foods for Teens.	Unknown
Getting to Know Vegetables.	Unknown
Good Food Works for You.	Unknown
How To Be a Wise Shopper.	Unknown
It's Good Food, Keep It Safe Part I & II.	Unknown
It's Good Food, Keep It Safe Part III & IV.	Unknown
Weight Control.	Unknown
You Are What You Eat.	Unknown
Food and Nutrition Information and Educational Materials Catalog-Cumultive Index 1973-1975.	0
Food and Nutrition Information and Educational Materials Catalog-Supplement 2.	0
Food and Nutrition Information and Educational Materials Catalog-Supplement 4.	0

Print and Multimedia Materials	As of June '80
Food and Nutrition Information and Educational Materials Catalog-Supplement 5.	0
Food and Nutrition Information and Educational Materials Catalog-Supplement 7.	0
Food and Nutrition Information and Educational Materials Catalog-Supplement 8.	0
Food and Nutrition Information and Educational Materials Center Catalog - Audiovisual Guide.	0
Nutrition; Better Eating for a Head Start.	0
Nutrition Education for Young Children.	0
Nutrition Film: "Jenny is a Good Thing: Leader's Discussion Guide.	Unknown
Nutrition - Staff Training Programs.	1
Menu Rummy.	Unknown
Nutrition for Young Minds.	1
The Unwanted Four.	2
Nutrition Education: an Integrated Curriculum K-6.	0
Vegetarianism in a Nutshell.	2
The Nutrition Education Team: Its Impact; Final Report, Part II.	Unknown
Winnie the Pooh, Nutrition and You.	3
Nutrition Education; a Multidisciplinary Approach.	0
Quantity Recipes.	Unknown
Work Smart-Stay Safe.	1
Your Food - Chance or Choice?	1
Yummy Rummy.	0

"Goody Box" Usage Report
SY 1979-80

Wilma Jozwiak

The "Goody Box" was the name given to a collection of books, pamphlets, and filmstrips on nutrition and nutrition-related topics which was made available during SY 1979-80 to all school systems in Tennessee. One person in each school system agreed to take responsibility for the kit, overseeing its use by teachers in the system. On receipt of the kit, these contact persons agreed to submit a usage report at the end of the year. A usage report form was mailed to each contact person along with a stamped self-addressed return envelope. One hundred and thirty usage forms were mailed, and 102 responses had been received by June 16, for a response rate of 78%. Of these responses, 19 were not on the provided form and lacked some of the information solicited on the forms. All of these non-regulation forms contained some usable information. In addition, three respondents reported that they had kept no record of usage, while one other failed to provide data on the number of participating students.

Some of these data seem unreasonably inflated; however, they are reported as received because there was no feasible way to determine exactly how data had been distorted. Total usage information is included in Table 5.1.

In addition to information on the usage of each item as reported in Table 5.1, the Goody Box Usage Report form included four open-ended questions. These questions were included in an attempt to assess the effectiveness of Goody Box materials. A summary of the answers to these questions is presented in the following section.

Question #1: In your opinion, would the "Goody Box" be better utilized if it were kept in another location?

Twenty-two contact persons chose to respond to this question. Thirteen contact persons expressed a need for additional Goody Box kits so that one could be placed in each school, or at least made available for schools at each organizational level (elementary, middle, and secondary). Several respondents suggested that nutrition-related materials would be put to much greater use if the material were available in the media center of each school. Two additional respondents suggested that dividing the Goody Box into three portions for elementary, middle and secondary grades would prevent materials appropriate for one level from being unavailable when the box was checked out to a lower or higher level. Some respondents solved this problem by checking the materials out individually rather than keeping the Goody Box together as a whole. Seven other respondents commented on problems peculiar to their own systems and usually provided their own solutions.

Table 5.1. Usage Rates for Goody Box Materials

TITLE	NUMBER OF TIMES CHECKED OUT			TOTAL NUMBER OF STUDENTS DIRECTLY INFLUENCED BY USE OF THIS MATERIAL		
	ELEMENTARY	MIDDLE	SECONDARY	ELEMENTARY	MIDDLE	SECONDARY
COOKING AND EATING WITH CHILDREN	217	23	9	8550	951	619
CREATIVE FOOD EXPERIENCES FOR CHILDREN	236	17	5	9314	919	121
EXPLORING FOODS WITH YOUNG CHILDREN	156	14	5	7427	544	120
FOOD FACTS TALK BACK	137	17	24	5371	707	1113
FOOD FADS AND FALLACIES	244	48	56	9920	1610	2231
FOOD FOR SPORT	98	14	759	4823	693	3159
FOOD: WHERE NUTRITION, POLITICS, AND CULTURES MEET, AN ACTIVITIES GUIDE FOR TEACHERS	85	18	49	3081	1175	2238
FUN WITH GOOD FOODS	147	7	13	5746	620	690
GOOD SENSE AND GOOD FOOD: THE FASCINATING STORY OF NUTRITION	170	88	64	10,104	2725	2009
IDENTIFYING NUTRITIONAL DEFICIENCIES	106	15	14	4335	1468	471
INDEX TO NUTRITION EDUCATION MATERIALS	114	9	25	5651	389	1445
INSIDE MY MOM	71	13	77	3775	1029	3669
NATIONAL DAIRY COUNCIL MATERIALS CARDBOARD FOOD MODELS	149	47	26	12,948	3753	1382
NATIONAL DAIRY COUNCIL MATERIALS FOOD COMPARISON CARDS	207	28	35	9052	1548	1781
NATIONAL DAIRY COUNCIL MATERIALS GUIDE TO GOOD EATING POSTER	185	25	15	6993	3362	1186
NATIONAL DAIRY COUNCIL MATERIALS NUTRITION SOURCE BOOK	122	15	22	4599	971	1917
NUTRITION FOR ATHLETES	94	10	45	3817	911	3259
NUTRITION FOR CHILDREN	309	27	21	12,122	1118	700
NUTRITION FOR YOUNG MINDS	127	16	31	4476	1234	1594
NUTRITION IN A CHANGING WORLD-PRESCHOOL	145	29	5	7523	478	90
NUTRITION IN A CHANGING WORLD-INTERMEDIATE	177	15	3	5406	1189	177
NUTRITION IN A CHANGING WORLD-PRIMARY	163	13	3	5942	672	120
PENCIL AND PAPER FUN TO TEACH NUTRITION	249	28	11	8418	1354	491
THE SNACKING MOUSE	406	44	13	20,013	1661	285

Question #2: Are there materials in the "Goody Box" which you or the people who checked them out consider to be inappropriate for inclusion? If so, which ones?

The majority of the contact persons who responded to the survey found all the materials included in the Goody Box appropriate. However, eight respondents expressed displeasure at the inclusion of certain materials. The filmstrip "Inside My Mom" met with displeasure in some communities, as well as with some respondents who felt that the film was not appropriate for inclusion in materials sent routinely to elementary schools. One respondent placed the filmstrip permanently with the high school home economics class. One respondent objected to the inclusion of "Identifying Nutritional Deficiencies" but did not provide a reason. Finally, one respondent found the activity guides for teachers to be of no value to the persons who had checked them out.

Question #3: Are there additional materials which you or users would like to add to the "Goody Box"?

Twenty-five respondents made general or specific recommendations in response to this question. Among the suggestions were: additional films and filmstrips, particularly filmstrips at the kindergarten level and filmstrips and films on food and consumer education. Multiple copies of some materials (unspecified) already included were suggested. In addition, more posters, slides or pictures of persons suffering from dietary deficiencies, flannel board figures, books *for* children about nutrition, nutrition games, and materials on microwave cooking, money management in relation to food buying, nurtition in relation to child care, and children and the advertising of food products on T.V. were suggested. The most frequent suggestion was the addition of new films and filmstrips.

Specific titles requested included:

Rating the Diets (Consumer Reports)

Snackology (The California Raisin Advisory Board)

Food for Life: *The Basic Four* (Tupperware)

The Journal of Nutrition Education

USDA Yearbook of Agriculture

The Physiology of Exercise (Sunburst Communications)

Your Body, *Fitness*, *Growth and Appearance* (Guidance Association)

Winnie the Pooh films on nutrition

Question #4: What other suggestions have you or other users of the materials had for improving the "Goody Box"?

Fifteen respondents chose to make suggestions for the improvement of the kit. (Several others used this question to state their approval of the Goody Box and its contents or to make promises to improve the circulation of the materials during the SY 1980-81). Three respondents mentioned the need for additional Goody Box kits, while another suggested dividing the box into three parts for use at the elementary, middle and secondary levels. Two contact persons made suggestions related to the containers--one thought decorating the box increased interest in his/her system, while another suggested constructing the box so that it opened from the front and acted as a display case. In addition, suggestions were made for elimination of the requirement of reporting usage, elimination of posters, addition of more parent involvement materials, addition of more duplicatable activities, the use of a promotional campaign conducted in person in each school, and the inclusion of materials suggesting ways to coordinate food service and nutrition education with other subject matter. One respondent felt the money should have been given to the system to be spent on materials suggested by local teachers.

Conclusions

The overall tone of the comments about the Goody Box was very favorable. Respondents considered such a package of materials to be a needed addition to their available resources. Most of the respondents expected usage to increase each year as the existence of the kit became common knowledge.

Consideration should be given to increasing the portion of the package devoted to films and filmstrips. In addition, the specific materials suggested for inclusion should be reviewed by the State NET Staff and perhaps added to the State Media Center if they cannot be included in the Goody Box. School systems also should be advised that individual materials may be checked out; the practice of sending the entire set of materials to a given school results in underusage of all materials.

Evaluation of "Goody Box" - Basic Nutrition Education Kit for Public School Systems in Tennessee

Dr. Jean Skinner

I. Resource References

1. Index to Nutrition Education Material (book) from Nutrition Foundation
   Comments: This book has a comprehensive listing of accurate and reliable nutrition education materials. In my opinion it is very appropriate for the Goody Box.

2. TN Resource List for Nutrition Education
   Comments: The list appears to be one that would be very helpful to nutrition education personnel for locating

resource people in their communities. Are there provisions for up-dating the list periodically?

II. Books, Posters and Visual Aids

Preschool

3. Cooking and Eating with Children
Comments: The introductory pages contain some important concepts and suggestions for cooking with children. However, the format is rather dull and these selections may be overlooked by teachers. The entire book, including recipes, is written for teachers and not specifically for preschool teachers. In fact, many of the recipes are too complex for the very young child. I suggest that this publication be classified "Elementary" rather than "Preschool".

4. Exploring Foods with Young Children
Comments: This publication has many good ideas for integrating nutrition education into existing subject matter areas such as communication, arithmetic, science, etc. For each area there are sections on objectives, procedures, activities/materials, and vocabulary words. Again, this publication is suitable for elementary teachers as well as preschool teachers. This publication would be useful in implementing the recently developed Nutrition Education Objectives.

5. Meal Time - Happy Time
Comments: This publication would be especially useful to parents and food service workers.

Elementary (& Up)

6. Creative Food Experiences for Children
Comments: This publication has many useful suggestions for nutrition education of children of various ages. Some of the materials could be used with young children, even kindergarteners and first graders ("What can we do with an apple?" p. 37. "What can we do with an orange?" p. 44). Other materials, such as the section on complementary proteins, are suitable for the high school age student. In a few instances, very sweeping, questionable statements are made without documentation - "Convenience foods encourage members of families to eat at different times . . . Food is less interesting (now than in the past) . . . We eat fewer . . . ethnic foods (today)."

7. Food Facts Talk Back
Comments: This pamphlet contains accurate facts about current

food fads and fallacies on such topics as additives, weight reduction, and pregnancy. This publication is a useful resource for teachers and older students.

8. Fun with Good Foods
   Comments: This booklet contains many nutrition-related activities such as puzzles and games. The material is accurate and suitable for elementary children.

9. National Dairy Council Materials
   Comments: The materials are colorful, accurate, and very useful in nutrition education. Because of their versatility, I recommend that these materials be given to each teacher. The Nutrition Source Book is an accurate and handy reference for teachers. However, teachers should be cautioned about teaching about specific nutrients before the children are developmentally ready for such detailed information. These materials are useful to teachers of children elementary age through high school. The materials contain teaching tools as well as information for reference.

10. Nutrition in a Changing World
    Penn State N.E. Curriculum Guides (Preschool - 6)
    Comments: These guides were carefully developed and pilot-tested in Pennsylvania schools. They are imaginative resources with highly accurate information. The guides are divided into broad grade level categories rather than specific grades (Early Childhood, Primary, and Intermediate). The content of the Intermediate Guide (4-6) in its current form is a bit overwhelming. There is so much material that students would have time for little else besides nutrition. However, that guide is under revision at this time, and many problems may be alleviated in the revised form. I recommend that the newer version of the Intermediate Guide be included in the Goody Box as soon as it is available. These guides would be very useful to teachers in Tennessee schools.

11. Spenco Exercise Poster Set
    Comments: Very colorful posters about health and exercise, NOT nutrition, and so may be only marginally useful for nutrition education.

12. Pencil and Paper Fun to Teach Nutrition
    Comments: Some of the activities outlined in this publication are suitable for elementary children, others

are too advanced in content for anyone except high school or college students. This resource will be helpful if used selectively.

For High School

13. Food: Where Nutrition, Politics and Culture Meet
Comments: I have reservations about this document. Some statements are inaccurate, others are misleading. For example, in the section on anemias (p. 66) it is implied that pernicious anemia is increased by an inadequate intake of vitamin B_{12}. Pernicious anemia is caused by a lack of a substance called Intrinsic Factor (IF) which is necessary for intestinal absorption of vitamin B_{12}. In another example, from the chart on p. 60, one can conclude that "excessive sugar consumption" is a major contributing factor to diabetes and that the disease can be prevented by "avoidance of refined sugar". Scientific data do not support this position, which is stated more accurately in the text (p. 63). On the other hand, the publication contains some interesting information and innovative ideas. However, I doubt that teachers have enough nutrition knowledge to differentiate facts from fallacies.

14. Food for Sport
Comments: This book is an interesting, accurate, and technical publication on nutrition for athletes. The book may be too advanced for many high school students, but will be a very useful resource for coaches and teachers. Many current issues are addressed.

15. Nutrition for Athletes
Comments: This publication contains accurate information about specific nutritional needs for athletes. The special needs of teenage athletes are described. This is an excellent publication for teachers, coaches, and advanced students.

III. Slides, Filmstrip Sets and Cassettes

16. Deficiency Disease Slides from Nutrition Today
Comments: Although most sections of this series are accurate and informative, there are several areas with misleading or inaccurate content: Examples of inaccurate information are the following:

Page 12 - Vegetarians (vegans) may run the risk of megaloblastic anemia, but not pernicious anemia, as stated. By definition, pernicious anemia is caused by a lack of Intrinsic Factor (IF) which facilitates absorption of vitamin B_{12}. Pernicious anemia is a form of megaloblastic anemia.

Added Note: Folic acid deficiency will also result in megaloblastic anemia. Many Americans are thought to have marginal intake of folic acid.

Page 19 - Text states that fruits and beef are rich in calcium - not so! Rhubarb is the only fruit with a significant amount of calcium and that may be chemically unavailable; beef provides calcium only for our pets who eat the bones.

Nutritional deficiencies are not a problem in the U.S. today. Therefore, it is my philosophy that nutrition education should focus on existing problems of which there are many. The study of dietary deficiency diseases appropriately belongs in a diet therapy course, in my opinion. Also, focus on deficiency diseases may result in "over compensation" by the lay audience. In the fear of not getting enough vitamins, many people are taking vitamin and mineral supplements in excessive and possibly dangerous amounts.

17. Nutrition for Children

A. Breaking the Fast

Comments: This filmstrip has many good ideas for enjoyable and unusual breakfasts. Cultural diversity is shown in the various menu items suggested - tacos, grits, etc. Also, children of several races are shown. However, many of the suggested breakfasts are rather high in sugar content - ice cream added to cereal, waffles with peaches and maple syrup, orange juice shake and a biscuit with honey, cinnamon toast. The central character is in early elementary school and the filmstrip is most appropriate for that age group.

B. The Nutrient Express

Comments: The style of this filmstrip is definitely for young children. Content focuses on what nutrients are found in the Four Food Families. The detailed subject matter, which includes topics such as vitamins, minerals and carotene, may be too advanced for the young child. The filmstrip may appear silly to the older child, when the food groups are more appropriately introduced. Cookies and cakes are categorized with grains rather than in the fifth category, sweets, fats, and alcohol which may leave the child with the impression that these foods are the same as bread or spaghetti. This filmstrip would not be suitable with current Nutrition Education Objectives.

C. George Gorge and Nicky Persnicky

Comments: Not all children will be big even if they eat the right foods as stated in the introductory section. This filmstrip also lacks sensitivity to the very fat or very skinny child with comments such as "too fat and slow to run away", "so skinny she was used as a jumprope", "people ran over Nicky who was too skinny to even see". I question the value of this filmstrip. It is designed for young children yet uses the terms carbohydrate, protein, vitamins, and minerals. The last section on a balanced diet is OK, although Basic Four Food Groups are introduced. Each meal does not have to include food from each food group, however.

18. Snacking Mouse

Comments: Entertaining filmstrip for children in early elementary grades. The material is accurate and focuses on an all too common nutritional problem among American children - snacking. It would be a good tool to begin lessons on appropriate snacks.

19. Food Fads and Fallacies

A. I Eat What I Like Regardless

Comments: This filmstrip would be suitable for upper elementary grades where the food habits of different cultures are studied. Food habits of various religions are also covered. A food fad is distinguished from different food habits based on family preferences, cultures or religion. This filmstrip has accurate information, presented in an interesting manner. It would also be an appropriate tool for older children as a review of some basic concepts.

B. Food Fads: You Bet Your Life

C. Is Natural Healthy?

D. Is There a Perfect Diet?

Comment: The remaining three filmstrips in this series are suitable for high school students. The information is sound, accurate, and presented in an interesting manner. Topics covered include health foods, food additives, pesticides and fertilizers, nutrient labeling, and fad diets. I highly recommend this series of filmstrips.

20. Good Sense and Good Food
Comments: These filmstrips are accurate in content and presented in an interesting manner. I recommend them highly for use with junior and senior high students. The subject matter is too complex for younger students.

21. Inside My Mom
Comments: This filmstrip contains an accurate and humorous presentation of the importance of good nutrition during pregnancy. The filmstrip is suitable for use with teenagers or adults. I recommend it highly.

22. Nutrition for Young Minds
Comments: Although the material in this slide series is technically accurate, the influence of nutrition on mental development is, in my opinion, overemphasized. The wider environmental influences as well as the genetic influences on mental development are ignored. We surely do not want students to conclude that poor (and sometimes hungry people) are mentally inferior. I question the use of this slide series except by well-trained teachers who will supplement the film with other materials to present a more balanced view.

General Comments About Section III

Most of the visual aids are more suitable for older children (junior and senior high) than for use in elementary schools, in spite of the fact that the major NET emphasis has been on the elementary school. The search should be continued for high quality materials suitable in format and content for elementary students.

Analysis of the Readability of "Goody Box" Materials

LeAnn Crowley

The readability of an article, pamphlet or book helps determine the appropriate grade level for which the work is written. By counting the average number of syllables and sentences per one hundred word passage, one can mathematically arrive at an approximate reading level.

Other factors must be considered, however. Short words and short sentences could be very arduous if the ideas, concepts, and/or vocabulary presented were of great difficulty to the reader.

In addition one must take into account the use of proper names or places and the repeated use of technical vocabulary.

In arriving at the approximate readability of nutrition materials in the "Goody Box" the Fry and Gunning-Fog methods were used.

Since the Gunning-Fog usually ranks materials slightly higher than the Fry index, an average of the two indexes generally was computed.

It is important that the appropriate vocabulary be taught prior to reading a selection. A reader's understanding of the technical vocabulary would greatly enhance his/her ability to comprehend a selection.

Using the named materials to teach nutrition education would necessitate a teacher's having the ability to adapt materials of varying reading levels to the needs of the individuals in the class.

The following materials were studied to obtain a readability factor and to ascertain their appropriateness for a given reading level.

Meal Time - Happy Time (See Skinner, Item #5)
A Guide for Parents

The American Dietetic Association
430 North Michigan Avenue
Chicago, Illinois 606011

This short pamphlet has an average readability of Grade 8. (A few passages are 4-5 level, but others are higher.) The charts "Guide to Nutrients . . . and what they do" and "Foods for Everyday" organize the concepts in outline form.

Food Facts Talk Back (See Skinner, Item #7)

The American Dietetic Association
430 North Michigan Avenue
Chicago, Illinois 60611

This average readability was computed at 12+ grade level.

It should be noted, however, that words such as fertilize, chemical, and insecticide were used several times within a 100-word passage. The repetition of these three-syllable vocabulary words raises the readability level.

The "Fact" and "Fallacy" sections of this work are very good. They provide a way of reinforcing the reading skill of comparing and contrasting.

Using photographs for illustrations is especially helpful for the older reader (Grades 7-12).

Fun with Good Foods (See Skinner, Item #8)

U.S. Department of Agriculture
Food and Nutrition Service
Program Aid No. 1204

According to the Introduction in Fun with Good Foods, the material is designed for 6-7-8 year olds and possibly could be used with preschool children under direct teacher guidance.

The general format is very good. The print is large and easy to read. The pictures are big and well outlined for a young child to color.

By using the varied activities in this material, one could more easily keep the interest and attention of the young child on the learning task.

The photographs (as used on pages 19 and 49) are helpful. Sometimes drawings and characterizations are difficult to decode.

Asking the learner to provide background information, such as "Draw your favorite foods in the milk group" on page 27, should help to develop the learner's critical thinking skills.

This material seems well suited to the population for whom it is intended, that is 6-7-8 year olds (or for Grades 1-2-3).

Pencil and Paper Fun to Teach Nutrition (See Skinner, Item #12)

Good Ideas Books Co.
20 Highmount Avenue
Warren, New Jersey 07060

This book of Spirit Duplication Masters includes the basis of teaching nutrition. They should be used as supplementary and enrichment activities, rahter than as the primary source for teaching the concepts to be developed.

At the bottom of each instructional page the instructor is given the concept to be developed or taught, as well as the grade level for which the material is intended.

There are pages designed for use with the primary grades (K-3), intermediate grades (4-6), high school and college.

As there are no pages specifically designated for Grades 7-8, these students could use the high school activities. Remedial readers could be given the pages designed for Grades 4-6.

The material also lends itself to developing other reinforcing skill sheets on nutrition.

Food: Where Nutrition, Politics and Culture Meet (See Skinner, Item #13)
An Activities Guide for Teachers by Katz and Goodwin

Center for Science in the Public Interest
1755 Street, N. W.
Washington, D.C. 20009

This appears to be an excellent activity text to use with junior high, high school, college and post-college age adults. As the Preface notes, the book could be used with ages 10 to 90.

The most important skill for the wise use of this text would be a teacher's or leader's competency in adapting the suggested activities to both the mental and emotional maturity of the population with which the leader is working.

The outline and structure are well organized and leave opportunities for choice of subject matter.

The Objective portion of the material provides purposes and goals -- needed tools for good teaching of any content area or concept.

Background information provides the reader with credible sources and ideas for finding additional resources, if needed.

The materials and resources portion of the text save the teacher a lot of time in outlining what will be needed to effectively teach the concept or idea.

Procedures are clearly identified by giving specific ideas for enrichment activities, as well as allowing for flexibility on the part of a creative teacher.

This particular text could successfully be adapted to a variety of content areas.

The text, Food: Where Nutrition, Politics and Culture Meets opens doors to more fully develop the learner's thought processes and give opportunities for making choices.

The book is designed to get the student involved in the creative and action processes that go with learning.

Food for Sport (See Skinner, Item #14)
Nathan J. Smith, M.D.

Bull Publishing Company
P.O. Box 208
Pals Alto, California 94302

The average readability of this book is 11+ grade level.

As previously discussed, the repeated use of tehnical vocabulary tends to raise the readability index.

Prior knowledge of the vocabulary would increase an understanding of the text.

Nutrition for Athletes (See Skinner, Item #15)
A Handbook for Coaches

American Alliance for Health,
Physical Education and Recreation
1201 Sixteenth Street, N.W.
Washington, D.C. 20036

The average readability was found to be at a 12+ grade level.

There are portions of the book such as on page 15 "Notes on Foods Scoreboards," which were found to have a readability of Grade 8. Other passages computed at Grades 10, 11, and 12.

In many selections the readability is high, as short sentences contain many three or more syllable words such as nutritional, ultimate, stamina, nutriment, comparable, dietory, etc.

The selections on "Misconceptions and Facts," pages 28-36, require the reader's ability to compare and contrast.

It should be noted that included in the title of this work are the words A Handbook for Coaches. Therefore, it should be used as a resource tool by the teacher. This probably explains the high readability.

Media Coverage of NET Activities

Wilma Jozwiak

Goal 5.5 of the 1979 NET State Plan (mentioned, but not numbered, in the 1980 NET Plan) involved providing information about the NET program to the population of the State through the print communications media. The State NET staff collected a sample of newspaper and magazine articles about nutrition-related activities in the school systems and about the NET program itself. No record was kept of media coverage on television or radio.

News releases represented in the sample came from professional journals as well as newspapers. Articles in professional journals generally were news releases from the State NET staff explaining the NET program. Newspaper articles usually described local school system activities, some of which were held in cooperation with agencies such as the Heart Association. Special ethnic menus served in conjunction with lessons about the country or culture of origin were highlighted, as were visits from "Nutribird" and "Nutriduck", two animals chosen to personify wise nutritional choices and provide good information about nutrition in the schools. In addition, some articles by consultants in special areas of nutrition and health contained a discussion of the diets of school-age children. Several articles consisted entirely of pictures of school personnel, children, and/or invited guests participating in special school food service activities.

The regional distribution of the articles in the sample was adequate. East, Middle, and West Tennessee school systems were represented, as well as metropolitan and small town systems. The more comprehensive, longer articles tended to be found in newspapers from the larger cities, while small-town newspapers were more likely to carry pictures of school visitors participating in special school food service programs.

The value of some of the activities reported is open to controversy (for example, one-time blood pressure screening of school children as a means of detecting hypertension). However, this sample of media coverage indicated that local school systems were attempting to make people aware of their nutrition-related activities.

A press release developed by the State NET staff about the overall purpose of the NET program would be appropriate, although such information might not be considered newsworthy by local newspapers. The development and distribution of a statement of the NET program purpose and goals would be helpful to the local NET participants in planning their own news releases. In addition, preparation of quarterly news releases focusing on interesting or timely portions of the NET program--for example, the ETV series on nutrition, or the curriculum components developed to correlate nutrition and the study of Tennessee history--might prove useful to NET participants. Future data collection also should include a sampling of non-print media.

Summary

Reactions of elementary school teachers who received the newsletter, the "Goody Bag", were quite positive concerning newsletter content. However, the sample of recipients who sent in an evaluation was too small to lend credibility to the findings. The nutrition consultant who assessed the content of the Goody Bag found that the publication generally presented accurate nutrition information that would be useful for elementary school teachers. The consultant recommended that a similar newsletter be designed with content appropriate for teachers in Grades 7-12. Recipients of the Goody Bag provided two suggestions:

(1) include more instructional aids and activities for teachers to use in teaching nutrition, and

(2) make sure each issue is delivered in time for teachers to use the activities suggested for special dates or holidays.

State Media Center personnel supplied information concerning the number of times various nutrition education materials were checked out by State education specialists or local school food service supervisors or managers. No information was provided concerning the number of students influenced by usage of these materials. Future usage report forms should be designed to include this information. Dr. Seuss on the Loose was checked out 42 times, and ten publications were checked out 30 or more times, but many materials were not checked out at all. Reasons for under-utilization should be probed and solutions sought.

School system representatives charged with the responsibility of checking out Goody Box materials to teachers reported that almost one-third of the 24 inventoried titles had been checked out 200 times or more. The filmstrip The Snacking Mouse had been utilized a total of 406 times, and the filmstrip series Nutrition for Children a total of 309 times. Contact persons estimated that 20,013 elementary school children had been "directly influenced" by use of The Snacking Mouse, 12,948 elementary school children had been influenced by use of the National Dairy Council cardboard food models, and 12,122 elementary school children had been influenced by Nutrition for Children filmstrips.

The nutrition consultant engaged by the evaluators gave high marks for accuracy in presentation of nutrition concepts to The Snacking Mouse, the National Dairy Council materials, and most other materials in the Goody Box. However, the Nutrition for Children filmstrips, which were so popular at the local level, did not receive a favorable review.

The number of films and filmstrips in the Goody Box should be increased. More than one Goody Box should be provided for those systems where usage is great. Contact persons should be encouraged to separate materials by grade level and lend only that portion of materials that is appropriate for the grade level for which materials are requested. The entire Box should not be checked out to a school that does not include Grades K-12. Additional copies of heavily used materials should be obtained.

The reading specialist engaged by the evaluators to assess the readability of Goody Box materials found that the repeated use of multisyllabic words such as nutritional, stamina, nutrient, and dietary raised the reading level of many of the materials to Grade 12 and above. The specialist recommended that teachers work carefully with students to develop the required technical vocabulary before using some of the materials.

A sample of NET-related newspaper and magazine articles was reviewed. Longer articles dealing with diet and nutrition were most often found in newspapers published in large metropolitan areas; pictures and short stories about local school system activities such as tasting parties were most often found in small-town newspapers. The evaluators recommended that the State NET staff develop for local papers at least one press release describing the overall purpose of the NET program and some of the related activities. Quarterly or monthly articles could also be prepared to publicize particularly interesting activities. Even if these stories were not utilized as written, the content should prove helpful to local nutrition educators as they plan their own news releases.

CHAPTER SIX

REVIEW OF PILOT PROJECTS

Appendix C contains a listing of nine pilot projects which were selected to receive NET funding for the school year 1979-80. Insufficient time and funds for travel prevented the evaluators from visiting more than one project site--that in Knoxville. A report on the visit to Whittle Springs Junior High School, where the project "Reaching Teens With Nutrition Education" was being carried out, is included in this chapter of the evaluation report.

During the last month of the NET evaluation Ms. Dulcie Peccolo developed a standard outline for gathering information about pilot projects and used the outline to conduct a telephone interview with the directors of three additional projects. The "Survey Form for Review of Pilot Projects," which will be utilized by the evaluators during project site visits in 1980-81, appears below. Reports follow on the projects in Putnam and Carroll counties and in Cleveland.

Survey Form for Review of Pilot Projects

Dulcie Peccolo

Project Name:

Location:

Audience:

Contact Person(s):

I. Synopsis of the Project

  A. Purpose of the Project

  B. Project Objectives

  C. Project Plan/Strategy

II. Basis for Project's Purpose/Objectives

  A. Evidence of needs assessment prior to the project

  B. If positive response to II - A, brief summary of needs assessment findings.

  If negative response to II - A, why was a needs assessment not conducted?

C. Based on needs assessment findings, what potential or actual overlap or linkage of services exists with other agencies?

III. Number, type and qualifications of personnel

IV. Accomplishment of Objectives -- Supporting Evidence

A. Factors influencing implementation (i.e., Did proposed activities take place?)

B. Summary of instructional methodologies (i.e., workshops, inservice training, classroom, etc.)

C. Summary of material development (i.e., appropriateness for project participants, quality of delivery and utilization)

D. Individual project outcomes (i.e., basis for measuring change in food related behavior, basis for evaluating outcome)

E. Nature of parental/community involvement

V. Summary

A. Project recommendations and corresponding changes

B. Relationship to overall state plan

C. Other

"Reaching Teens with Nutrition Education"

The goal for the "Reaching Teens with Nutrition Education" project was to improve the effectiveness of nutrition education for adolescents. A two-day workshop on nutrition for teenagers was conducted in the Fall of 1979 for 25 health and home economics teachers in Grades seven through nine in the Knoxville City school system. An estimated 3,000 of the 6,628 junior high school students in the system were reached by these teachers. The objectives for the workshop were to increase the knowledge and the confidence of teachers in order to increase the knowledge, and to improve the attitudes and dietary practices, of adolescents.

The workshop focused on the food and nutrient needs of adolescents, including growth needs, needs of the athlete, and needs of the pregnant teenager. Current information on the knowledge and food habits of adolescents, controversies, fads, and scientific discoveries was included. Suggestions were made for materials and activities to be included in the units to be developed by the teachers. Plans for evaluation included a pre- and post-test of teacher and student knowledge. The dietary practices of students were to be assessed using a 24-hour dietary recall.

The following site visit report summarized the experience of one junior high school in the Knoxville City school system.

Site Visit Report

Place: Whittle Springs Junior High School, Knoxville, Tennessee

Date: May 26, 1980

Contact: Ms. Amy Cross, Home Economics Teacher

Site Visitors: Wilma Jozwiak and Lynne Roberson

Two teachers from Whittle Springs Junior High School (Grades 7, 8, and 9) participated in the Nutrition Education Workshop conducted by Knoxville City Schools personnel in Fall 1979. The home economics teacher at Whittle Springs taught nutrition to approximately 150 students in Grades 7, 8, and 9. The health teacher taught one unit on nutrition to approximately 120 students in the 8th grade.

In her evaluation of the Nutrition Education Workshop Ms. Cross noted that both the content and the materials were very helpful in the development of curriculum activities. The units of instruction she developed were integrated with the units on foods. Evaluation consisted of tests of knowledge. Behavioral change was discussed with students but not evaluated.

Ms. Cross indicated that she utilized the services of the system Nutrition Coordinator who made available books, journals, and films, provided ideas about development of the units, and assisted in the administration of 24-hour dietary recalls to the students. She observed that the dietary recall served to increase student awareness of food habits, but was not accurate as a measure of behavioral change.

Ms. Cross indicated that nutrition was not integrated into other subject matter areas and she was not aware of any interest in doing so among other teachers. Ms. Cross encouraged students to share what they had learned with their parents, but there was no structured link with parents to increase their involvement. It was noted that it is difficult to involve parents effectively in any school activities.

There was no Youth Advisory Council at the school. The students stay in the school for lunch. Ms. Cross had no information about the extent of participation in the school lunch program. Ms. Cross reported that the food is prepared very well, but the meals usually contain several foods which are high in carbohydrate and they lack fresh fruits and vegetables. Menus are determined at the system level, and the students and school personnel do not have an opportunity to comment on menus.

Ms. Cross had conducted a survey to determine whether any students would be interested in a unit on weight control. The responses indicated that there was an interest. Ms. Cross noted that counseling might be needed to help the students achieve their objectives. She also recommended the amplification of content on weight control in teacher education workshops.

Finally, Ms. Cross noted that home economics teachers have no curriculum supervisor and no guidelines for the home economics curriculum. She believed that such aid would be helpful to the teachers and beneficial to the students.

Review of Pilot Projects-Putnam County
(Phone Interview Survey)

Dulcie Peccolo

Project Name:	A Multidirectional Approach to Nutrition Education of Children
Location:	Tennessee Technological University, under the sponsorship of the Putnam County Department of Education
Audience:	Nutrition education team of "teachers"--kindergarten primary, secondary and vocational teachers, superintendents, principals, supervising teachers, parent volunteers, school food service supervisors, cafeteria managers, and older students acting as peer teachers.
Contact Person:	Dr. Cathy Baker, Project Director

I. Synopsis of the Project

A. Purpose of the Project

The overall purpose of this project is to bring nutrition education to children by coordinating and encouraging the efforts of many "teachers." By establishing a team of teachers the process of integrating nutrition information into existing course work will be possible. Primarily, the ultimate change sought in the child is a more positive attitude toward accepting a wider variety of foods and an understanding that nutrition is important for intellectual development and health.

B. Project Objectives

The major objectives of the program are:

(1) To improve menu planning practices of SFS personnel. (NET Goal #4)

To improve the quality of food served in the National School Lunch Program. (NET Goal #4)

To encourage SFS personnel to evaluate their present programs, making changes where necessary. (NET Goal #4)

(2) To develop an awareness in parents and teachers and, through them, in students, that proper nutrition is necessary for full participation in academic and extracurricular activities. (NET Goals #2 and 5)

(3) To dispel misinformation and supply current information to coaches and health teachers concerning nutrition and physical

fitness. (NET Goal #8)

(4) To contact principals, supervisors, and superintendents regarding the matter of nutrition education and encourage their leadership among teachers. (NET Goal #1)

To encourage Breakfast Program participation. (NET Goal #7)

To involve principals with SFS personnel and teachers in efforts to develop special events related to nutrition. (NET Goal #1)

(5) To make available to teachers a variety of materials and supplies for classroom use and sound basic nutrition knowledge. (NET Goals #2 and #3)

(6) To combat nutrition misinformation that confronts students. (NET Goal #7)

To improve nutrition attitudes and knowledge among students and to promote nutritious eating habits among students. (NET Goal #7)

To publicize nutrition-related activities carried out in classrooms while providing factual information to the general public. (In addition to NET Goals)

C. Project Plan/Strategy

The following strategies correspond numerically with the objectives provided in section I-B:

(1) Managers and SFS personnel will be instructed by the nutrition education consultant at a two-day Educational Conference. Improved food preparation methods will be taught through the use of films with a tasting session using the prepared foods following training. Further encouragement and reminders of their duties will be mailed to the managers throughout the 1979-80 school year.

The SFS personnel will be encouraged to use posters, displays and verbal one-to-one instruction in their cafeteria.

Use of sack lunches and family-style service will be encouraged by giving appropriate menus, recipes, and cost information.

(2) Teachers will provide children with a list of snacks to take to their parents to choose from and encourage the formation of "snack brigades" as a class project.

Parents in the Parent Volunteer group will be instructed by letters and pamphlets.

(3) Coaches will be instructed by the nutrition education consultant at the Educational Conference. Knowledge gained will be evaluated with pre- and post-tests.

(4) Principals will be contacted by the nutrition education consultant at two study council meetings and instructed in a) how an event such as "Heart Day" (where students would learn about heart disease and be served a lunch with foods appropriate for a heart patient) could be developed, and b) the importance of breakfast and how they can implement a breakfast program. Letters of information and encouragement will be sent soon after the meetings.

(5) The nutrition consultants will offer a graduate course in nutrition education to be taken for credit at Tennessee Tech. Univ. Half of the teachers involved will share their learnings with their students to see if increased knowledge about nutrition leads to improved habits. The other half will be a control and will not teach nutrition education in the classroom. They will learn to pre- and post-evaluate attitude, knowledge, nutrition status and plate waste, the latter using a visual technique developed at Florida State University.

Presentations at the Educational Conference will be made by the nutritional consultants with emphasis on specific activities for their particular discipline. Materials will be available and explained fully rather than just provided. Followup inquiries will be used to evaluate the implementation of the suggestions. Encouragement for interacting in joint projects with their respective cafeteria managers will be given along with concrete suggestions for these projects.

(6) The teachers will teach the students in a classroom situation using Food . . . Your Choice and information gained during the Educational Conference.

Before a new food is introduced in the cafeteria, it will be shown to the students in the classroom.

The SFS manager will visit classrooms, and give one-on-one instruction and encouragement.

The student council will appoint a committee to help the SFS Manager with menu planning (a representative group of students might be selected for this purpose by faculty). This idea will be proposed at the Principal Study Council Meetings. Students will tour the school cafeteria.

Sixth grade students at Uffleman Elementary School in Monterey will receive nutrition instruction from their teacher and senior Food and Nutrition majors from Tenn. Tech Univ.

They will purchase and prepare nutritious snacks and meals at a newly purchased "kitchen center" for the classroom. Selected students will then teach younger children and invite them to join in their meals. These older students will publicize their project and nutrition facts through radio spots and newspaper articles.

Children will be served lunch family-style.

Children will eat nutritious snacks in the classroom prepared by parents (and peer teachers).

Older students will learn about insurance terms and issue Nutrition Insurance Policies to younger students at Uffleman Elementary School.

II. Basis for Project's Purpose/Objectives

A. Evidence of needs assessment prior to the project:

The need for the project was demonstrated by surveying school food service personnel, teachers, parents, and superintendents/principals/supervisors of instruction in the Upper Cumberland Region. Informal polling and phone conversations with these individuals showed that more nutrition education was needed than was offered at the time of the needs assessment.

B. If positive response to II-A, brief summary of needs assessment findings:

The needs assessment for this project found a minimum amount of nutrition education programs and classroom activities being implemented in the Upper Cumberland district. A need for further nutrition education, materials and support was reported. Formal nutrition classes were not found at any grade level except in home economics courses in all junior and senior high schools. The most pressing need demonstrated through the survey related to the effects of nutrition inadequacies on learning abilities.

If negative response to II-A, why was a needs assessment not conducted:

Not applicable.

C. Based on needs assessment findings, what potential or actual overlap or linkage of services exists with other agencies?

At the time of the needs assessment survey it was estimated that only 0.1% of the total instruction time in grades K-12 in the Upper Cumberland Region was devoted to nutrition education. Accordingly, no overlap of services was evident.

The Tennessee Agricultural Extension Service offered nutrition instruction for third and fourth graders which was said to be very effective. Duplication of subject matter/methods was avoided in the project to take advantage of this linkage of services.

III. Number, type, and qualifications of personnel:

Dr. Cathy Baker, the project director, is employed at Tennessee Technological University. She team-taught the graduate course in nutrition education offered as one of the project's components. The research assistant working with the project held a master's degree in biology and had a teaching certificate.

IV. Accomplishment of Objectives -- Supporting Evidence:

A. Factors influencing implementation:
(i.e., Did proposed activities take place?)

At the onset of the project the project director had hoped for more parental participation. When the proposal was written a parent volunteer group in the Upper Cumberland Region had agreed to work with the project. By the time the project went into effect in 1980 this volunteer group was not able to follow through with its earlier commitment. The project director indicated the time and money allocated for parental involvement was channeled into other areas of the project.

Another factor which delayed implementation of the project was the long purchasing cycle for kitchen equipment. The project director indicated it took two months to get the equipment delivered and installed properly.

B. Summary of instructional methodologies (i.e., workshops, inservice training, classroom, etc.):

A major instructional component of this project was the graduate course offered in nutrition education at Tennessee Tech. University. The nine graduate students taking this course completed a course evaluation which will be included in the project's final report.

A two-day inservice training session was held during the annual Education Conference at Tennessee Technological University. Food service personnel from twelve of the fourteen Upper Cumberland counties were represented, with a total attendance of 94 for the two days.

Fourteen health teachers attended a one hour workshop at the Educational Conference, entitled "The Nutrition Game Plan." Dr. Cathy Baker was the trainer and showed a slide/cassette program.

Dr. Baker also provided a presentation at the Principals' Study Council concerning the Breakfast Program and organizing a Heart/Health Day.

C. Summary of material development (i.e., Appropriateness for project participants, quality of delivery and utilization.):

Two twenty-five minute videotapes on food preparation using commodity foods and menu planning were written and produced by Dr. Cathy Baker, project director. At the time of this evaluation these videotapes and other materials developed under the project were not available for review.

D. Individual Project Outcomes

Food service personnel taking part in the inservice training sessions were sent a followup letter asking them to evaluate their training. Of the eight responding, all rated the training as excellent.

Coaches and health teachers attending the "Nutrition Game Plan" workshop were given pre- and post-tests. The group answered 71% correctly on the pretest and 83% correctly on the post-test.

Graduate students taking the nutrition education course were given pre- and post-tests. The class averaged 71% correct on one hundred questions covering basic nutrition, fads and food safety before instruction. After instruction the class averaged 94% correct.

E. Nature of Parental/Community Involvement:

Community involvement with this project included the Heart and Health Day. This was held for fifth and sixth graders. According to the project director, 21 students of the 500 screened for high blood pressure were referred to local doctors for further checking.

V. Summary

A. Project recommendations and corresponding changes:

The project director recommended starting the purchase cycle for any needed equipment as soon as possible. As late deliveries can delay the project plan, the director advised an early order for equipment to anyone attempting to replicate the efforts of this project.

B. Relation to overall State Plan:

The project director indicated that this project was dedicated to the State NET Plan and goals. (Note: See Section I-B for this linkage.)

Review of Pilot Projects-Carroll County
(Phone Interview Survey)

Dulcie Peccolo

Project Name:	Carroll County Nutrition Education and Training Program
Location:	Huntington, Tennessee
Audience:	Forty Food Service Personnel and Supervisors from Four Rural School Systems within Carroll County
Contact Person(s):	Lon Z. Shuler, Project Director *Vicki Hatcher, Child Development Specialist, and NEAT Program Evaluator (*Note: Ms. Hatcher provided the information for the phone survey as the project director was on vacation.)

I. Synopsis of the Project

A. Purpose of the Project

The main purpose of this project was to:

(1) Improve the quality and eye appeal of foods served, and to control costs by training food service managers and workers in the principles and practices of menu planning, quantity food preparation, merchandising and service.

(2) Improve the quality of food served, maintain sanitation standards, and encourage good food eating habits of children in child care centers and in family day care homes throughout the State.

B. Project Objectives

The major objectives of the program are to:

(1) Develop a Nutrition Education and Training (NEAT) Program.

(2) Provide staff development for 40 food service employees and their supervisors.

(3) Plan for dissemination of information both internally and externally.

(4) Plan for the management of the program by objectives.

C. Project Plan/Strategy

The following strategies were to be employed to achieve the project's objectives:

(1) Operation of Program -- Develop and implement a learning environment to provide nutrition education and training services to personnel in the four school systems.

(2) Staff Development -- Develop and implement a pre- and in-service staff development program, based upon a needs assessment of individuals involved, that will be adequate in preparing all food service personnel including supervisory personnel for those competencies necessary to implement the program.

(3) Dissemination -- A plan for dissemination of information (both internally and externally) concerning the program will be implemented and refined during the duration of the project.

(4) Management -- A plan for the management by objective for the program will be implemented and refined during the grant period for the project.

II. Basis for Project's Purpose/Objectives

A. Evidence of needs assessment prior to the project:

The need for this program was established by doing a needs survey, going to records in school systems, questioning administrators and staff personnel in the schools and gathering data from published materials compiled in Carroll County.

B. If positive response to II-A, brief summary of needs assessment findings:

The findings of this project's needs assessment demonstrated that the school system was unable to meet the training needs of all the cafeteria staff due to a lack of instructional material and specialized trained personnel. The needs assessment showed Carroll County to have a high percentage of economically and socially deprived families with related nutrition problems.

If negative response to II-A, why was a needs assessment not conducted:

Not applicable.

C. Based on needs assessment findings, what potential or actual overlap or linkage of services exists with other agencies?

No overlap of training for food service personnel was evident.

III. Number, type and qualifications of personnel:

The project director is presently the director of federal programs for Carroll County School Systems. He has a master's degree in elementary education and has completed additional hours of graduate study.

In addition to the project director, two consultants worked directly with the project. One consultant held an M.S. degree with a major in foods and nutrition and the second consultant was a child development specialist.

Three registered dieticians evaluated the school cafeterias taking part in the program at the beginning of the project. The dieticians also conducted the inservice training sessions for the food service workers.

IV. Accomplishment of Objectives -- Supporting Evidence:

A. Factors influencing implementation:
(i.e., Did proposed activities take place?)

Of the initial 40 food service personnel selected to participate in the project, only 34 individuals participated for the entire year. The remaining 6 food service workers were unable to participate for the duration of the project due to construction work being done in their school cafeteria.

Bad weather delayed one scheduled inservice training session for food service workers. This session was simply postponed and carried out at a later date. Parent tasting parties also had to be rescheduled due to bad weather.

The only proposed activity which did not take place at all was the consulting service offered to other school cafeterias by food service personnel taking part in the project. This was a result of the fact that no requests were received for this type of service.

B. Summary of instructional methodologies (i.e., workshops, inservice training, classroom, etc.):

Inservice training was the primary instructional method used for food service personnel represented in this project. Workshops were provided by project consultants on presenting food attractively, work simplification skills, and techniques in food preparation. Inservice sessions were held monthly, from September through May.

C. Summary of material development (i.e., Appropriateness for project participants, quality of delivery and utilization.):

Learning modules on basic food preparation techniques were developed as a part of this project. Modules included such topics as standardizing recipes, using commodity foods, evaluating yeast breads, and preparing salad dressings. The format was very straightforward for the most part. The modules were done in large block type, making them very easy to read. The module on basic work simplification techniques lacked the more sophisticated presentation of the other modules available for review and appeared to be directed toward an audience with a much lower reading level.

D. Individual Project Outcomes:

Inservice training sessions were evaluated by each food service worker through a questionnaire distributed at the conclusion of each session. All participants were said to be "enthusiastic" about the information they received in the training sessions. Food service supervisors also evaluated individual food service workers after their participation in the workshops. The results of this evaluation will be available in the project's final report.

Both pre- and post-intervention surveys were conducted in interviews with 50 school children to measure attitudes about cafeteria meals. In general, most of those interviewed had more favorable comments related to food services in the post-intervention survey.

E. Nature of parental/community involvement:

Food service workers from each cafeteria represented in the project staged parent tasting parties in conjunction with PTAs. Response to these tasting parties was said to be most favorable.

V. Summary

A. Project recommendations and corresponding changes:

The child specialist who provided the information for this phone survey recommended more parental involvement for future projects of this nature. As parents play such an important role in children's dietary habits, their involvement is important. The child specialist did not have any suggestions for increasing parental input.

B. Relationship to the overall State Plan:

The Tennessee NET State Plan goals addressed in this project were:

(#4) To improve the quality and eye appeal of foods served, and to control costs by training food service managers and workers in the principles and practices of menu planning, quantity food preparation, merchandising and service.

(#6) To improve the quality of food served, maintain sanitation standards, and encourage good eating habits of children in child care centers and in family day care homes throughout the State.

Review of Pilot Projects-Cleveland
(Phone Interview Survey)

Dulcie Peccolo

Project Name: "Progress For People," Human Resources Agencies Head Start Program and Cleveland Day Care, Inc.

Location: Cleveland, Tennessee

Audience: (1) Day care and Head Start teachers and cooks
(2) Parents of the children

Contact Person: Ms. Merle Woodlee, Project Director

I. Synopsis of the Project

A. Purpose of the Project

The goal for this project was to "insure that the nutrition curriculum developed for the Cleveland Day Care and Head Start Program will contribute to the growth and development, the socialization and cultural preservation of the child (sic) to the family, community and state."

B. Project Objectives

The major objectives of the program are to:

(1) Make a plan for the nutritional assessment of each child twice each year.

(2) Collaborate with centers on adequately planned meals and snacks.

(3) Plan a workshop each month for cooks.

(4) Plan one workshop each month on nutrition for teachers.

(5) Plan a program on nutrition education to be presented each month to parent meetings.

C. Project Plan/Strategy

The following strategies correspond numerically with objectives provided in section I-B:

(1) Registered dietician to check data and plot growth charts twice each year. Check any special feeding problems such as allergy, diabetes, etc.

(2) Introduce new food, new recipes, and child-preparation food activity each week.

(3) Hold one monthly workshop for cooks covering standardized recipes, food purchasing cost, preparations, and sanitation.

(4) Curriculum developed for sequential monthly workshop materials on: basic nutrition, creative activities in nutrition for children, understanding growth charts, infant and child nutrition, resources.

(5) A 15-minute program on nutrition to be prepared in planned progression throughout the year for parent meetings.

II. Basis for Project's Purpose/Objectives

A. Evidence of needs assessment prior to the project:

The need for this project was demonstrated from a study made by the Head Start staff. The staff used the Clinch-Powell Home Visitor Guide to Assessing Family Nutrition and made three visits to each child's home to assess home conditions and make recommendations.

B. If positive response to II-A, brief summary of needs assessment findings:

On the basis of these home surveys a definite need for nutrition education was demonstrated. For example, the survey of home environments pointed out sewage problems, stoves that did not work, inadequate refrigeration for food and a general lack of nutrition knowledge. The survey demonstrated a need for nutrition education for the day care teachers, day care center cooks, and parents of the children.

If negative response to II-A, why was a needs assessment not conducted:

Not applicable.

C. Based on needs assessment findings, what potential or actual overlap or linkage of services exists with other agencies?

The Nutrition Performance for Head Start and the Tennessee Day Care Standards direct the centers to provide nutrition education to parents and children. As the day care centers in this project are not served by any school systems or other institutions they must plan their own nutrition programs.

III. Number, type, and qualifications of personnel:

Ms. Woodlee, the project director, has a bachelor's degree in general home economics. As part of her undergraduate program she completed some course work in the area of nutrition. As she did not have the initial qualifications spelled out in the proposal for project director, i.e., a registered dietician with at least two years of experience, she felt it necessary to seek consulting help from the Public Health Program Nutrition Director.

IV. Accomplishment of Objectives -- Supporting Evidence:

A. Factors influencing implementation: (i.e., Did proposed activities take place?)

The major factor influencing the implementation of this project was the fact that the present project director, Ms. Merle Woodlee, did not get started until November. Prior to this time two earlier project directors had resigned. Ms. Woodlee indicated this late starting date presented several problems. First was the time factor which caused a delay in getting the project's activities underway. The second problem which faced the project director was that of adjustment to the new position. As many of the workshop participants felt it was "something they had to do," it took a while to build good working relationships between the director and project participants.

B. Summary of instructional methodologies (i.e., workshops, in-service training, classroom, etc.):

Workshops represented the major form of instruction for this project. It was not possible to hold workshops each month during the first quarter of the project since the first two project directors resigned.

Once the workshops got underway instructional packets were developed for food service workers, teachers and parents. These program packets were designed to be adapted for use with various audiences. Videotapes were also made of the workshops which were available for later use.

C. Summary of material development (i.e., Appropriateness for project participants, quality of delivery and utilization.):

"Program packets" were developed in conjunction with the workshops held during the project. The parent packet contained information on the following: 1) Vitamin C, 2) Basic Four Group, 3) Economic Food Buying, 4) Combining Proteins, and 5) The Potato. The packet for food managers presented information on the following: 1) Storing Perishable Foods, and 2) Conserving the Nutritive Values of Foods. The teacher packet contained information on the following: 1) The Basic Four, 2) Key Nutrients, 3) Nutritional Activities for Children, and 4) Play Store.

In general, the delivery of materials was well organized and in a professional format. It would be hard to estimate a reading level for the materials as they mostly provided information in list rather than paragraph form. In most cases the reading level appeared to be appropriate for the audience the project was said to serve, yet adaptable for other settings as well.

D. Individual Project Outcomes:

Two basic forms of evaluation were used for this project.

(1) A survey of parents' homes was made which included areas of sanitation, equipment, and a 24-hour recall. These data were used as a basis for evaluating improvement. The 24-hour recall showed milk and meat consumption remained basically the same, while consumption of fruits and vegetables had increased at the conclusion of the project.

(2) Pre- and post-tests for staff before and during monthly workshops were administered to determine changes in knowledge, and attitudes about information presented. The post-tests showed an increase in knowledge, according to the project director. Further details related to this increase will be supplied in the project's final report.

E. Nature of parental/community involvement:

Parental involvement was achieved through home visits. Nutrition programs were also presented at the monthly parent meetings and were said to be well received. Parents were also invited by the project director to attend all workshops held for the staff. A very limited number of parents took part in staff workshops.

V. Summary

A. Project recommendations and corresponding changes:
The project director felt the basic design for this project was well-founded. However, she did recommend getting an earlier start which would be helpful in building better rapport with staff at the beginning of the program.

B. Relationship to overall state plan:

Goal #4 of the Tennessee NET State Plan was addressed by this project.

Summary

In general, the four pilot projects reviewed were proceeding according to schedule and appeared to be accomplishing the objectives specified in project proposals. Target groups were being reached and for the most part were satisfied with the training and materials they had received. The only problems identified were predictable ones: staff turnover, delays in delivery of purchased equipment, and project directors' self-perceived inadequacy to influence as large an audience as they would like. Pre-project needs assessments and post-project evaluation, albeit internal evaluation rather than evaluation by an external consultant, were built into the proposal framework and were being, or had been, carried out. The evaluators look forward to visiting pilot project sites during 1980-81 to gain a better-informed perspective from which to assess their effectiveness.

CHAPTER SEVEN

SPRING 1980 ASSESSMENT OF NUTRITION KNOWLEDGE, ATTITUDES, AND PRACTICES, AND PERCEPTIONS OF NUTRITION EDUCATION

Assessment of Knowledge, Attitudes, and Practices

Dr. Jo Lynn Cunningham

Rationale for Assessment

Evaluation of any program must be determined in relation to a criterion represented by the goals and objectives for that program. Therefore, identification of the goals and objectives for nutrition education for the State of Tennessee was essential to development of the evaluation plan. Because these goals and objectives for students in Grades K-12 were being developed as part of another NET project, cooperation between these two projects was essential to construction of an appropriate evaluation scheme.

Because nutrition education programs often have been criticized for dealing only with knowledge, with little or no attention to the attitudes or practices of participants, a basic decision for evaluation of nutrition education programs in Tennessee was to include all three dimensions of beliefs—i.e., the cognitive, affective, and behavioral components. The content was represented by the goals and objectives framework shown in Appendix I.

In planning the general framework for evaluation of nutrition education for Tennessee, two concerns were evident--one related primarily to the issues of formative evaluation and the other related primarily to the issues of summative evaluation. The first of these questions was posed: What are the nutrition beliefs of students and nutrition educators in the State? And the second was based on the first: How effectively are nutrition education programs--and, more specifically, the NET-sponsored programs--responding to the needs of the students and nutrition educators? Efforts during this first year of the NET evaluation project were directed primarily to establishing an evaluation plan (including development of an evaluation design, assessment instruments, and data collection procedures) and collecting baseline data.

Design and Sample

In order to respond to the summative evaluation question, a pretest-posttest control group design was selected, with baseline (pretest) data collected during late spring of 1980. To assure representation of all areas of the State, the development districts were used as a basis for sampling sites.

Schools. A plan was devised whereby five schools would be identified from each of the nine development districts. Of these five, four were to be elementary schools (i.e., Grades K-6), and the remaining one was to be a secondary school (i.e., Grades 7-12). To the extent possible, two of the elementary schools were to represent relatively urban areas and two were to represent relatively rural areas. Of the four elementary schools two (one urban and one rural) were to be designated as treatment schools (i.e., schools which would participate in the 1-day workshops scheduled during the summer of 1980 as part of the NET objectives project), and the other two were to be designated as comparison schools (i.e., schools which would not participate in the 1980 workshops but would have priority for participating in workshops during the summer of 1981). The secondary school from each district was to be from the same district as one of the elementary schools designated as a comparison school. To be eligible for inclusion, a school had to have a school food service program, contain the designated set of grades, and agree to participate in data collection and (if designated as a treatment school) in a summer workshop.

In general, this plan was followed for selection of schools to participate in the project. In one district, however, there were not five schools meeting the criteria which could be identified as potential participants. In several cases, the distribution of grades in the schools was something other than the K-6 and 7-12 designations, so somewhat different configurations were included. Although the rural/urban distribution was not achieved within each development district, the total sample included a balance of schools from rural and urban areas. A list of the 48 participating schools is given in Appendix D.

Subjects. From each school, several categories of participants were included. These were students (all grade levels), teachers (elementary and secondary), food service personnel (managers and workers), administrators, and parents. The number of participants in each category is shown in Appendix J.

A plan was devised whereby, in general, two elementary schools (one treatment school and one comparison school) were targeted for Grades K, 3, and 5; the other two elementary schools were targeted for Grades 1, 2, 4, and 6. The children in one classroom at each of the targeted grade levels for each school were included in the study. In the secondary schools, two classes representing a cross-section of the student population (e.g., English, study hall) were included for each grade level. Parents of all students (elementary and secondary) selected for inclusion also were asked to participate.

At each elementary school one teacher at each grade level was included--the teachers of the classrooms targeted for student assessment plus one teacher at each of the remaining grade levels. In each secondary school, two teachers were selected from each of four subject matter areas: home economics, biological science, social studies, and health. At each participating school, the principal, other school administrators (e.g., assistant principal, curriculum supervisor), food service manager, and food service personnel also were included.

Measurement

After the goals and objectives for nutrition education for Tennessee were identified, existing instruments for assessment of nutrition beliefs were reviewed. Primary criteria used in examining instruments for possible use included content validity (i.e., the match between the Tennessee NET goals and objectives and the dimensions included in the instrument), appropriateness for various developmental levels, ease of administration, and published psychometric indicators (e.g., reliability and validity indices). No instruments were identified which provided the necessary match with the Tennessee goals and objectives; in addition, most instruments were deficient on at least one of the other criteria. Therefore, it was necessary to construct instruments specifically for use in this study.

Instrument development. A set of 11 different instruments was needed for the study: forms for students at five developmental levels (i.e., Grades K-1, 2-3, 4-6, 7-9, and 10-12); teachers at two levels (i.e., elementary, secondary); food service personnel in two categories (i.e., managers, workers); administrators; and parents. The decision was made to include a measure of attitudes for all 11 groups, a self-report measure of practices for all 11 groups, and a measure of knowledge for 9 of the 11 groups (all except school administrators and food service workers). In addition, in other components of the study there were measures of perceptions of nutrition education, especially the NET program of nutrition education, for all 11 groups, and an observational measure of eating behavior (plate waste) for the five student groups.

A multidisciplinary team was involved in the development of the instruments for assessing nutrition knowledge, attitudes, and practices. This team included specialists in human development; nutrition and food sciences; early childhood, elementary, and secondary education; consumer studies; and measurement and assessment. The group of ten people was divided into five pairs, each containing at least one person with some background in nutrition and food sciences and at least one person with some background in working with students at a given developmental level. A subcommittee of five people (one representative from each of the five teams) was designated, and from this subcommittee a core working group of three people (representing expertise in early childhood, elementary, and secondary education and in the content areas of nutrition and food sciences, human development, and measurement and assessment) was constituted.

Given the framework for structure of the instruments, the first step was to generate an item pool. Each of the five teams was given responsibility for generating approximately 80 nutrition knowledge items (20 items at the designated developmental level for each of the 4 goals in the objectives framework), 40 nutrition attitude items (10 items for each of the 4 goals), and 40 nutrition practices items (10 items for each goal). All knowledge items were multiple-choice format with four response alternatives. All attitude and practice items were Likert-type scales, with the number of alternatives varying by developmental level (2 alternatives for Grades K-1, 3 alternatives for Grades 2-3, 4 alternatives for Grades 4-6, and 5 alternatives for Grades 7-9 and 10-12).

From the item pool generated at this point, the team selected approximately half the items in each category for use in the pilot form of the student instruments. The number of items per objective was based on the relative priorities designated for each goal and objective at each developmental level at the time of the objectives framework was constructed as part of the objectives project; each objective at each developmental level was represented by at least one knowledge item, and each goal was represented by at least two attitude and two practices items. The distribution of items by objective and by grade level (elementary) or subject area (secondary) on the pilot forms of the instruments is shown in Appendix K.

All knowledge items for the adult instruments were taken from the item pool already generated. A core of 30 knowledge items was selected for inclusion on all four adult instruments containing a knowledge dimension. As shown in Appendix K, this core of items included representation of each terminal objective and each of the five developmental levels represented by the different student instruments. The additional knowledge items for each adult instrument were selected because of the particular relevance of the content to that group. The attitude and practices items were selected because of their particular relevance to each group and included representation of nutrition-related attitudes and practices directed toward self as well as ones directed toward the students with whom they were affiliated. Each goal was represented by at least three attitude items and three practices items on each adult instrument. The distribution of items by objective and by developmental level of student content on the pilot forms of the instruments is shown in Appendix K.

Instruments were designed for administration in accordance with the developmental level of the responderts. For students in Grades K and 1, each knowledge item was represented by a slide with pictures representing the four response alternatives; each picture was designated by a geometric symbol (i.e., circle, square, triangle, star) keyed to a symbol grid on the student answer sheet. Each question was read to the students, and students were instructed to mark the appropriate symbol on the answer sheet. For the attitude and behavior items, geometric symbols also were used to designate the standard response alternatives (i.e., smiley and frowny faces for agree and disagree; star and square for yes and no). For students in Grades 2 and 3, each student had a copy of the instrument with the printed questions and response alternatives, but items were read to the students, who were instructed to mark their answers directly on the copies of the instruments. Students in the other grades were given instrument copies to read on their own and were instructed to respond by marking optical scan sheets. Parent instruments were designed for response directly on the form, but all other adult instruments were designed for use with optical scan sheets. Copies of the pilot versions of all instruments are available upon request.

Pilot test. All instruments were pilot-tested in Knox County and adjacent counties; a list of the schools participating in the pilot test is given in Appendix M. Because of the length of the pilot test versions of the instruments, the student instruments were designed to be administered in two class periods. All other procedures were the same as those planned for the actual data collection. The number of participants who completed the pilot test is shown in Appendix N for each instrument.

Participants in the pilot test were asked to indicate suggestions for improving the clarity of the general format and/or specific items as well as administration procedures. Reliability analyses (Cronbach's alpha) were computed for all scales, and item analyses[1] were conducted for the knowledge components. The reliability coefficients and average difficulty and discrimination indices for the various scales on the pilot versions of all instruments are given in Appendix O.

A panel of judges was used to review items for the various instruments at several stages. Both a preliminary version of the pilot test version of each instrument and the actual pilot test version were reviewed by professionals in relevant areas of nutrition and food sciences and human development and education.

In general, comments from pilot test participants, field test personnel, and professional reviewers were positive. However, a few questions were raised about the appropriateness of using four response alternatives with kindergarten children. Therefore, an alternate format for the instrument for students in Grades K-1 was tested in a kindergarten setting. On this form, half the knowledge items had two response alternatives, and the other half had four response alternatives. The difficulty level of the items with only two response alternatives was somewhat low, and the item analyses for the items with four response alternatives were well within established levels, so the format with four response alternatives was retained for all instruments.

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[1] The difficulty index for each item was computed using the following formula:

$$\text{Item difficulty} = \frac{T - (U + L)}{T},$$

where T = total number of possible correct responses for that item by upper 27% of respondents and lower 27% of respondents (based on ranked total scores),

U = total number of correct responses on that item by respondents ranked in upper 27%, and

L = total number of correct responses on item by respondents ranked in lower 27%.

The discrimination index for each item was computed using the following formula:

$$\text{Item discrimination} = \frac{U - L}{L},$$

where U and L again refer to the number of correct responses to the item by respondents ranked in the upper 27% and lower 27%, respectively, based on their total scores.

Instrument revision. Based on results of the pilot test and review by the panel of judges, the instruments were revised and condensed. In general, the items with the best indices on the reliability and item analyses were retained, although care was taken to assure that content validity was maintained by ensuring representation of all objectives on each form and proportional representation of each goal. In general, those items were retained which made the greatest contributions to the scale reliability (i.e., had the highest correlation with the scale total) and which, in the case of knowledge items, had relatively high discrimination indices (i.e., at least .40) and moderate difficulty indices (i.e., between .30 and .70). In a few cases, items were included which did not meet these criteria because they were important to ensure the content validity of the form and/or because they represented common misconceptions about nutrition and therefore were deemed important to include as a basis for measuring potential change in selected areas.

The same general model was used for constructing the final instruments as was used for the pilot versions. For the student instruments, the number of items per objective was based on the relative priorities designated for each goal and objective at each developmental level; each objective at each developmental level was represented by at least one knowledge item, and each goal was represented by at least one attitude item and one practices item. For the adult instruments, a core of 25 knowledge items was selected, again including representation of each terminal objective and at least two items for each of the five developmental levels represented by the different forms of student instruments; distribution of items in this core is shown in Appendix P. A core of five attitude items and five practices items also was identified for the adult instruments. Additional knowledge items were included on the forms for both elementary and secondary teachers and for food service managers. Additional attitude and practices items were included on all adult instruments. All the items in the knowledge core were items included on the various student instruments; none of the knowledge items selected to supplement the core were included on student forms but represented areas of knowledge particularly pertinent to the adult groups on whose instruments they were included. The distribution of items by objective and by developmental category for the final versions of the instruments for students and adults is shown in Appendix P. Copies of the final versions of all instruments appear in Appendix Q.

Reliability and validity. Based on the data collected from across the State for the baseline phase of the evaluation project, reliability analyses were computed for all scales, and item analyses were conducted for the knowledge components. Although the reliability indices were somewhat lower than those on the pilot versions of the same instruments because only approximately half as many items were included on each scale, all the knowledge scales were within acceptable limits even using a relatively stringent criterion (alpha of .70 or above). Item analyses also reflected acceptable discrimination and difficulty indices for the items on all scales, with few values for items outside the relatively stringent criteria set for evaluation of items on the pilot versions of the instruments. Reliability indices for the attitude and practices scales on the adult instruments also were good; on the student forms, which had fewer items, these indices were lower. Reliability coefficients and average difficulty and discrimination indices for the various scales on the final versions of all instruments are given in Appendix R.

Content validity of the instruments was determined by plotting the distribution of items by goal and objective in relation to developmental and/or subject matter area and ensuring adequate representation for each dimension. Evidence of the construct validity of the forms was obtained from the review process carried out by professionals in the areas of nutrition and food sciences; early childhood, elementary, and secondary education; human development; consumer studies, health, home economics, social studies, and science; and measurement and assessment.

Data collection. Data were collected by field assistants who had been recruited and trained specifically for this project. The group of 14 field assistants included 12 white females, 1 black female, and 1 black male; of this group all but 3 participated in the pilot testing. Each field assistant had at least a baccalaureate degree, and all had some previous experience in school settings.

Two training sessions were held for the field assistants prior to collection of the pilot data. In these sessions, field assistants were instructed concerning format of the instruments, general data collection procedures, and the importance of public relations and professional judgment. They also were asked to be sensitive to any modifications in procedures which would facilitate collection of the baseline data. After the pilot testing, an additional training session was scheduled for all field assistants who were to participate in collection of the baseline data. At this session procedures were reviewed and problem areas were discussed.

For the pilot testing field assistants worked in teams of two in each school. For collection of the baseline data, each field assistant was responsible for working independently in the assigned schools. In general, field assistants were assigned to geographic areas, so most data from a development district were collected by the same field assistant.

Results and Discussion

Scores were computed for each participant on each of the three components of the instruments. Scores for the four knowledge subscales (representing knowledge in relation to the four broad goals on which the objectives framework was based) also were computed. Knowledge scores represented the total number of correct responses; items left blank were considered to be incorrect. For the attitude and practices scales, weighted scores were computed. Average scores for each instrument for the knowledge scales and for the attitude and practices scales are shown in Appendix S.

Because these data represented baseline assessments only, differences among groups were not computed. Any differences between treatment and comparison schools will be used to make adjustments in the analysis of the post-treatment data. From an inspection of scores for these two groups on the baseline data, no systematic differences were apparent; however, the extremely large sample size probably would result in statistically significant differences by traditional criteria.

The process used for instrument development precludes effective comparisons either across groups of participants or across dimensions of beliefs for any given category of participants. The range of 48% to 66% for average percentage of knowledge items answered correctly on the different instruments is consistent with the construction of all instruments at a moderate difficulty level. The relatively narrow range of variability across the knowledge subscales for each instrument also reflects the item selection process--e.g., the internal consistency criterion for reliability coupled with the content validation process. Furthermore, that variability which does exist is, at least to some extent, a direct function of scale reliability (and an indirect function of number of items in the scale).

Summary

In summary, the two major objectives for the first year of this NET evaluation project were accomplished. An evaluation plan was devised and operationalized; included was development of a set of assessment instruments for various student and adult groups. In the pilot test and baseline data collection, evidence of instrument reliability as well as validity was obtained. Baseline data were collected and will be used in the evaluation of 1980-81 nutrition education programs in Tennessee.

Student Responses to Open-Ended Questions

Margaret P. McCabe

The assessment instruments described in the previous section of Chapter Seven also included an open-ended question: "What changes, if any, would you make in the school lunch program?" This question was asked of students in Grades 2-12; students in Grades K-1 were not asked to respond to this type of question. Responses to the question were analyzed by developmental level (i.e., Grades 2-3, Grades 4-6, Grades 7-9, and Grades 10-12). Similar response patterns were identified for each level.

Responses for students in grades 2-3 were distributed in the following manner:

- 105 Students said they wanted a greater variety of food served. They wanted something besides milk to drink, and they requested more meats and vegetables and more desserts.
- 23 Students said they wanted a better quality of food.
- 15 Students said they wanted more food served on the plates.
- 40 Students said they would change the procedures in the cafeteria: have shorter lines, more tables, less noise, more time to eat, a different seating arrangement (they did not like a boy-girl placement), less spanking.
- 82 Students said they would make no changes.
- 351 Students did not answer the question or had no comments.

The response pattern for Grades 4-6 was the same as that for Grades 2-3:

- 243 Students said they wanted a greater variety of food served instead of the same food week after week. They requested drinks other than milk (mostly soft drinks) and more fruits and vegetables, pizza, hamburgers, tacos, and ice cream.
- 175 Students wanted a better quality of food: hotter and less greasy.
- 15 Students said they wanted more food served on the plates.
- 124 Students said they would change the procedures in the cafeteria: give students a choice of food, have vending machines; have faster service, lower prices, cleaner lunchroom, more room between the chairs in the cafeteria, and create a more pleasant environment (perhaps with music in the background).
- 116 Students would make no changes.
- 56 Students did not answer the question or had no comments.

Response for students in Grades 7-9 were distributed in the same categories listed above:

- 70 Students said they wanted a greater variety of food instead of the same food week after week. They wanted something other than milk to drink and they wanted such foods as pizza, hamburgers, and spaghetti.
- 119 Students wanted a better quality of food: hotter, less greasy, well done, more spice (instead of bland food), new recipes, more well-balanced meals, and more sanitary methods of preparation and service.
- 15 Students said they wanted more food on the plates.
- 126 Students said they would change the procedures in the cafeteria: give students a choice of food, have a salad bar and vending machines, give students a voice in planning the school menu; there should be faster service, more time to eat, lower prices, and a more pleasant atmosphere (perhaps even with music in the background).
- 17 Students did not answer the question or had no comments.
- 28 Students said they would make no changes.

The response pattern for students in Grades 10-12 differed somewhat from that of the other developmental levels:

- 65 Students said they wanted a greater variety of food instead of the same foods served week after week. Also, they wanted more nutritious foods, more appealing food, more vegetables, and more "junk" foods and soft drinks. They requested that "good foods" such as pizza and hamburgers be served on alternate days rather than on the same day.
- 72 Students wanted better quality of food: hotter, less greasy, cleaner cooking conditions, and avoidance of meat substitutes.
- 26 Students said they wanted both a greater variety and a better quality of food.
- 8 Students said they wanted more food served on the plates.
- 122 Students said they would change the procedures in the cafeteria: students should have more choices, a salad bar, and a choice of drinks, including soft drinks; students should have a voice in planning the school menu; there should be faster service, better organization, lower prices, and a cleaner cafeteria. Also, some students wanted to have the opportunity to eat lunch off-campus.
- 2 Students thought the school should provide students with nutrition information to help them choose balanced lunches.

- 16 Students did not answer the question or had no comments.
- 26 Students said they would make no changes.

The following chart contains a summary of common response categories and the number of responses in each category according to developmental level:

	Grades 2-3	Grades 4-6	Grades 7-9	Grades 10-12
Variety	105	243	70	65
Quality	23	175	119	72
More Food	15	15	15	8
Procedures	40	124	126	122
No Changes	82	116	28	26
No Answer	351	56	17	16

Although response patterns across developmental levels were fairly constant, there were age/grade differences in response frequencies per category. In general, more students in the elementary grades (i.e., Grades 2-3, and Grades 4-6) did not answer the question, had no comment, or said they would make no changes in the school lunch program, than did those students in the upper grades (i.e., Grades 7-9, and Grades 10-12). Elementary students frequently said they would expand the variety of food served in the school cafeteria; students in Grades 4-6 indicated that they wanted a better quality of food. Students in Grades 7-9 and in Grades 10-12 also frequently mentioned the quality of the food. However, they mentioned more frequently changing procedures in the lunchroom such as having more choice in food selection and improving the atmosphere of the cafeteria.

Assessment of Plate Waste

Dr. Jean Skinner

Methods

Observational techniques were used to determine the amount of food wasted (plate waste) by children participating in the school lunch program in treatment and comparison schools. Selection of schools and classes within schools has been described previously. Five children from each grade were selected randomly as subjects for this portion of the study. In the elementary schools the five children constituted a sample taken from the classes that were assessed via the paper-pencil instruments for nutrition knowledge, attitudes, and practices. In secondary schools children usually do not eat together as a class in the lunchroom; therefore, the five students selected for the plate waste study may or may not have been assessed for the other variables. In no case were children notified in advance that they were to be observed in the lunchroom setting.

Observations of the amount of food remaining on each subject's lunch tray were made by field assistants. Using the Plate Waste Data Sheet (see following page) field assistants recorded plate waste information with the following options: no food left, 1/4 serving left, 1/2 serving left, 3/4 serving left, or all serving left. Food was classified in the following categories: main entree, bread, cooked vegetable #1 (starchy vegetable), cooked vegetable #2, raw vegetable, fruit, dessert, milk, and a miscellaneous category "other". Most meals did not contain food in all categories.

Observations were made in each school on a single day with whatever happened to be on the menu that day. No attempt was made to standardize menus among schools.

Caution should be used in interpretation of these data due to limitations in the methodology. Several variables that might have affected the results of the study could not be controlled. First, menus varied among schools; it is well recognized among school lunch personnel that certain menus are more acceptable to the children than others. The amount of plate waste in a given school may vary considerably from day to day. Therefore, the amount of plate waste on the day of observation was partially dependent on the popularity of the menu items. A more accurate picture of plate waste in a particular school would require at least several days of observation. In addition, the number of students observed within a single school was too small to draw conclusions about that school.

Other uncontrolled variables among schools were the quality and quantity of food served. Both factors directly influence the amount of plate waste.

Another source of error involves the judgments made by field assistants which may have varied over time as well as among different field assistants. Although all field assistants participated in a brief training session, none were experienced in this type of research.

Results of this plate waste study will be useful in comparison of control and experimental schools and in noting changes over time, but not in providing information about individual schools. The data will also provide a description of current plate waste in representative school lunch programs in Tennessee.

PLATE WASTE DATA SHEET

School Code____________ (cc 1-2)

Field Assistant's Name______________________

Grade____________ (cc 3-4)

Teacher____________________ Date____________

	MAIN	BREAD	COOKED VEG #1	COOKED VEG #2	RAW VEG	FRUIT	DESSERT	OTHER	MILK
Food Name									
Amt. Served									
Child #1									
Child #2									
Child #3									
Child #4									
Child #5									
a. Sum									
b. Sum ÷5= waste/child									
c. % Waste (b X 100)	(cc5-6)	(cc7-8)	(cc9-10)	(cc11-12)	(cc13-14)	(cc15-16	(cc17-18)	(cc19-20)	(cc21-22)

0 = No Food Left
.25 = ¼ serving left
.50 = ½ serving left
.75 = 3/4 serving left
1.00 = All serving left

oz. = ounce
c. = cup
pt. = pint
t. = teaspoon
T. = tablespoon

Results and Discussion

Usable plate waste observations were made on 820 children in grades K-12 in 47 Tennessee schools. Distribution of subjects by grade is presented in Table 7.1. Data on the amount of plate waste in each food category are given in Table 7.2.

Results of this study suggest that considerable amounts of food are wasted daily in school lunch rooms in Tennessee. Plate waste ranged from 11% for milk to 40% for raw vegetables. Some food categories were more acceptable to children than others. Following milk, the most acceptable food groups were the main entree, fruit, and dessert with plate waste of 19, 21, and 21%, respectively. Vegetables were less well accepted with plate waste ranging from 29% to 40%. These data suggest that nutrition educators should emphasize the merits of vegetables. Care should also be taken to maintain high quality in the preparation and serving of vegetables.

The mean data are weighted in favor of the food habits of elementary school children, who comprise 73% of the samples. Several trends can be noted by the comparison of plate waste by children of different ages. First, the percentage of plate waste was high in Grades K, 1, and 2 for all categories of food; the portion sizes that these young children were served might have been a factor in the amount of food wasted. Second, the percentage of food wasted in the main entree and bread categories dropped sharply at Grade 6, coinciding with the onset of puberty in these children. Plate waste of starchy vegetables dropped appreciably at Grade 9, again reflective of teenage appetites. In Grades 11 and 12 desserts were the least acceptable food category, perhaps reflective of the desire for a slim figure among many teenage girls.

These data are useful in observing gross changes among groups of children or in noting general trends in eating behavior. Due to weaknesses in the methodology small differences between groups should be ignored. In addition, no attempts were made in this study to investigate the reasons for plate waste. Some reasons for plate waste may be unrelated to the food itself. A more detailed and controlled study is necessary to explore the reasons for plate waste in school lunch rooms.

TABLE 7.1. DISTRIBUTION OF PARTICIPANTS IN PLATE WASTE STUDY BY GRADE.

GRADE	NUMBER OF PARTICIPANTS
K	80
1	85
2	85
3	85
4	85
5	90
6	85
7	35
8	35
9	45
10	45
11	35
12	30
TOTAL	820

TABLE 7.2. PERCENTAGES OF FOOD PORTIONS WASTED BY CHILDREN IN GRADES K-12* IN SELECTED TENNESSEE SCHOOL LUNCH PROGRAMS, 1980.

GRADE	Main Entree	Bread	Starchy Vegetable	Other Cooked Vegetable	Raw Vegetable	Fruit	Dessert	Milk
				PERCENTAGES WASTED				
K	33	50	32	48	63	26	35	18
1	32	39	39	38	46	16	28	8
2	24	40	36	37	57	9	17	14
3	14	24	31	36	53	26	8	14
4	13	23	41	35	46	32	20	16
5	19	33	27	32	53	23	25	8
6	12	17	36	34	51	22	22	14
7	10	18	38	43	31	20	11	13
8	11	17	24	49	22	11	10	10
9	12	15	11	24	11	26	11	5
10	18	21	14	26	31	23	17	3
11	14	22	9	19	10	14	28	4
12	9	15	6	11	11	15	33	8
Mean % Wasted	19	28	29	34	40	21	21	11

* n = 820

** "Other" category not included because foods were very different.

Assessment of Perceptions of Nutrition Education

Wilma Jozwiak

One may measure the status of nutrition education through nutrition knowledge testing and by observation of eating behavior using plate waste studies. In order to have a full picture, however, it is important also to determine the perceptions that individuals have toward aspects of nutrition that affect their behavior, and to secure self-reports of eating behavior. Some questions on each instrument designed for the NET Statewide Assessment were directed toward the end of obtaining perceptions and self-reports of eating behavior.

The tables which follow present the percentage of persons choosing each response alternative on the perception and eating behavior items. The tables are arranged either in experimental condition by response alternative, or experimental condition by grade, format.

These data were submitted to statistical analysis using Cramer's V, which is similar to a correlation procedure. No relationships were significant, indicating that there were no significant differences between the comparison and treatment groups on these items of the NET Statewide Assessment. The similarity of comparison and control groups on these measures allows one to draw some general conclusions about the state of nutrition perceptions in Tennessee prior to intervention.

About 80% of parents responding to the survey disagreed with the statement "I think I understand the purpose of Tennessee's Nutrition Education Program (NET)." A similar percentage disagreed with the statement "In general, I am satisfied with what I know about nutrition." More than half the parents surveyed were not satisfied with the school food service program in their child's school, and felt that their children considered the school lunchroom not a very nice place to eat. About half the parents surveyed said they would be interested in participation in various school food service activities in the school.

About half the teachers sruveyed felt that they understood the purposes of the NET program. Almost 70% of teachers surveyed were satisfied with the extent of their knowledge of nutrition, while about half were satisfied with the food service program in their schools.

About half the food service managers and 60% of food service workers surveyed were satisfied with the extent of their knowledge about nutrition. More than 80% of workers and managers were satisfied with the school food service program in their schools. Generally, less than 50% of food service workers felt that school administrators, teachers, parents, or students should be involved in planning school food service programs. These respondents' answers also suggested that few people other than those directly employed in the school food service program were currently involved in planning.

School administrators were generally satisfied with their school food service programs (almost 90%), while about 50% felt they understood the NET program. Less than 40% were satisfied with the extent of their teachers' knowledge of nutrition. About half the administrators said they always or usually ate the school lunch as provided for the students.

Student responses at the high school level were not divided into comparison and treatment groups. Less than half of these 10th, 11th and 12th grade students liked the quality and variety of the food and the way it was serviced at their schools. About half thought the food cost too much and did not look very good, while about 85 percent thought eating away from school was more fun. Though about half thought the line was too long, more than half disagreed with the statement "The cafeteria in my school is not a nice place to eat." More than half said they would like to be involved in planning the school lunch program, but almost 90 percent had not. More than 50% of students in grades 6, 7, and 8, which also did not have a comparison group, did not like the quality, variety and manner of service of the food in their school, and thought that the food did not look very good. Almost half thought it cost too much. More than 70 percent thought eating away from school was more fun, but slightly more than half disagreed that the cafeteria was not a nice place to eat. More than 60 percent said they would like to help in planning for the food service program, but about 90 percent had never done so.

Responses in grades K-6 involved both comparison and treatment groups. More than 50 percent of students in grades 2-6 liked the food fixed for lunch in their schools, and said they would like to help plan the lunches. However, more than 60 percent said they never got to help plan. About 80 percent of the students in grades 2-6 reported that they received at least some nutrition education at home, and almost 90 percent believed they were getting at least some nutrition education at school.

Children in both treatment and comparison groups from kindergarten and first grade were generally acquiescent in their responses, as might be expected. Between 80 percent and 90 percent of all students responding reported that they liked learning about the foods that are good for them and that they liked the lunch served at their schools. About 80 percent reported learning about foods both at home and at school, and more than 80 percent reported eating the lunches fixed at school. Most K-1 students (80%) reported that they would like to help choose which foods would be served for lunch; however, as with other students in the survey, few (about 40%) reported being allowed to give input.

These data provide a picture of the current status of the nutrition perceptions and eating behaviors of selected groups in Tennessee. The data suggest that while persons in all groups surveyed indicated that they would like to become involved in the school food service program, actual involvement of persons other than school food service personnel was rare. It is also evident that the primary consumers of the service -- the students -- were not, as a group, satisfied with the quality, variety and presentation of the food. The survey also showed that more than half of the adults surveyed in all groups were not satisfied with the extent of their knowledge about nutrition.

These measures of perceptions and self-reports of behaviors provide a counterpoint to the knowledge items on the statewide assessment. Analysis of the data from the second administration of the assessment in the Spring of 1981 will help determine not only whether the level of nutrition knowledge increases in the state, but also whether the difficult transfer from knowledge to perceptions and behaviors takes place.

TABLE 7.3. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM O - PARENTS

Response Format:
1 Strongly agree
2 Mildly agree
3 Undecided
4 Mildly disagree
5 Strongly disagree

ITEM		RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(1) I think I understand the purpose of Tennessee's Nutrition Education Training Program (NET).	Control	3	2	14	35	46
	Treatment	2	2	17	32	47
(2) I am satisfied with the school food service program at my child's school.	Control	13	18	11	36	22
	Treatment	6	13	11	33	37
(3) In general, I am satisfied with what I know about nutrition.	Control	2	7	10	48	33
	Treatment	3	6	10	48	33
(4) If the school or community were to offer free programs, workshops, or classes in nutrition, I would like to participate.	Control	8	8	40	19	25
	Treatment	7	6	42	18	27

ITEM		RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(5) I am satisfied with what my child is learning about nutrition at school.	Control	6	10	17	40	27
	Treatment	3	5	17	36	39
(6) My child does not like the way the food in the school cafeteria looks.	Control	17	22	9	28	24
	Treatment	25	20	12	28	15
(7) My child thinks it is more fun to eat away from school than in the cafeteria at school.	Control	16	16	11	21	36
	Treatment	25	17	10	21	27
(8) My child thinks the school lunchroom is not a very nice place to eat.	Control	32	25	9	19	15
	Treatment	44	21	9	15	11

ITEM		RESPONSE	ALTERNATIVE			
		SA	MA	U	MD	SD
(9) The food in my child's school cafeteria costs too much.	Control	33	25	15	13	14
	Treatment	36	23	17	15	9
(10) My child thinks the line in the school lunchroom is too long.	Control	28	27	17	14	14
	Treatment	34	23	20	13	10

TABLE 7.4. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM O - PARENTS

RESPONSE FORMAT:
1 Always
2 Usually
3 Sometimes
4 Seldom
5 Never

ITEM		RESPONSE ALTERNATIVE				
		ALW	USU	SOM	SEL	NEV
(21) My child participates in the school food service program for breakfast.	Control	2	3	6	4	85
	Treatment	11	7	9	5	68
(22) My child participates in the school food service program for lunch.	Control	47	22	12	4	15
	Treatment	60	17	9	3	11
(23) My child participates in the school food service special milk program.	Control	22	13	14	5	46
	Treatment	34	12	16	5	33
(24) My child takes a lunch to school.	Control	4	6	22	18	50
	Treatment	3	4	20	15	58

ITEM		RESPONSE ALTERNATIVE				
		ALW	USU	SOM	SEL	NEV
(25) My child leaves the school grounds for lunch.	Control	1	1	1	1	96
	Treatment	1	0	1	0	98
(26) My child eats the plate lunch in the school cafeteria.	Control	47	24	18	6	5
	Treatment	61	21	11	3	4
(27) My child eats lunch from the fast food line in the school cafeteria.	Control	5	3	14	4	74
	Treatment	7	4	7	4	78
(28) My child eats lunch from the salad bar in the school cafeteria.	Control	2	1	13	5	79
	Treatment	2	1	6	3	88

ITEM		RESPONSE ALTERNATIVE				
		ALW	USU	SOM	SEL	NEV
(29) My child eats lunch from the Coke and candy machines at school.	Control	1	1	5	4	89
	Treatment	0	0	3	3	94
(30) My child skips lunch.	Control	1	1	12	11	75
	Treatment	0	1	4	6	89
(31) If I had time, I would help in planning school menus.	Control	10	7	48	12	23
	Treatment	8	6	53	10	23
(32) If I had time, I would help make posters and decorations for the school cafeteria.	Control	7	7	46	16	24
	Treatment	8	7	51	14	20

ITEM		RESPONSE	ALTERNATIVE			
		ALW	USU	SOM	SEL	NEV
(33) If I had time, I would take turns with other parents eating lunch with the children in the school cafeteria.	Control	14	9	56	9	12
	Treatment	17	11	56	6	10
(34) If I had time, I would help with a tasting party for the children at school.	Control	14	10	50	11	15
	Treatment	16	12	53	6	13

TABLE 7.5. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 1 - ELEMENTARY TEACHERS (GRADES K-6)

RESPONSE
FORMAT: 1 - Strongly agree
2 - Mildly agree
3 - Undecided
4 - Mildly disagree
5 - STrongly disagree

ITEM		RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(1) I understand the purposes and in-school activities of Tennessee's Nutrition Education and Training (NET) Program.	Control	29	33	22	5	11
	Treatment	25	41	23	9	2
(2) In general, I am satisfied with the extent of my knowledge about nutrition.	Control	23	45	9	20	2
	Treatment	11	46	8	28	7
(3) The undergraduate curriculum for all prospective teachers should include nutrition education.	Control	55	23	5	12	5
	Treatment	52	34	7	3	4
(4) I am satisfied with the food service program in my school.	Control	21	43	7	18	11
	Treatment	18	35	8	21	18

ITEM		RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(5) School food service personnel should be responsible for planning the food service program in the school.	Control	39	28	10	15	8
	Treatment	28	37	17	11	7
(6) School administrators should be involved in planning the school food service program.	Control	30	23	17	19	11
	Treatment	21	42	11	11	15
(7) Teachers should be involved in planning the school food service program.	Control	21	22	21	16	20
	Treatment	17	38	8	20	17
(8) Students should be involved in planning the school food service program.	Control	12	32	20	15	21
	Treatment	15	36	7	13	29

ITEM		RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(9) Parents should be involved in planning the school food service program.	Control	8	26	24	11	31
	Treatment	5	32	16	24	23
(10) I would attend a nutrition training course offered the summer by the State Department of Education (college credit available at my expense).	Control	11	16	36	8	29
	Treatment	21	19	33	9	18
(11) I would attend a nutrition training course offered in this area by the State Department of Education during the year (college credit available at my expense).	Control	9	14	33	16	28
	Treatment	13	30	33	10	14
(12) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop taught in this area during the year (in-service credit available).	Control	32	31	14	8	15
	Treatment	37	47	9	2	5

ITEM		RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(13) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop in the summer (inservice credit available).	Control	26	17	20	9	28
	Treatment	34	36	16	3	11
(14) Having Coke and candy machines in a school discourages the children from eating balanced meals.	Control	52	18	12	8	10
	Treatment	62	19	10	7	2

TABLE 7.6. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 1 - ELEMENTARY TEACHERS (GRADES K-6)

FORMAT: 1 - Always
2 - Usually
3 - Sometimes
4 - Seldom
5 - Never

ITEM		RESPONSE ALTERNATIVE				
		ALW	USU	SOM	SEL	NEV
(25) I eat the school lunch as provided for the children in my school.	Control	22	30	28	16	4
	Treatment	17	19	20	32	12
(26) I have included nutrition in my classroom instructional activities this year.	Control	21	36	30	8	5
	Treatment	43	19	27	11	0
(27) I have involved children from my classes in the food service program of the school this year (e.g., offering opinions about foods, making posters for display in the lunchroom).	Control	9	12	20	23	36
	Treatment	18	9	19	21	33
(28) If the State Department of Education provided a guide for the teaching of nutrition as part of existing subject matter, I would use it in teaching my classes.	Control	29	42	22	5	2
	Treatment	34	42	22	2	0

ITEM		RESPONSE ALTERNATIVE				
		ALW	USU	SOM	SEL	NEV
(29) School food service personnel are responsible for planning the food service program in my school.	Control	57	26	8	7	2
	Treatment	62	22	10	1	5
(30) School administrators are involved in planning the food service program in my school.	Control	11	8	19	26	36
	Treatment	12	12	18	21	37
(31) Teachers are involved in planning the food service program in my school.	Control	0	0	7	21	72
	Treatment	2	3	5	19	71
(32) Students are involved in planning the food service program in my school.	Control	0	1	6	21	72
	Treatment	3	2	15	15	65

		RESPONSE ALTERNATIVE				
		ALW	USU	SOM	SEL	NEV
(33) Parents are involved in planning the food service program in my school.	Control	1	0	3	13	83
	Treatment	2	2	2	12	82

TABLE 7.7. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 2 - SECONDARY TEACHERS (GRADES 7-12)

Response
Format: 1 - Strongly agree
2 - Mildly agree
3 - Undecided
4 - Mildly disagree
5 - Strongly disagree

ITEM	RESPONSE ALTERNATIVE				
	SA	MA	U	MD	SD
(1) I understand the purposes and in-school activities of Tennessee's Nutrition Education and Training (NET) Program.	29	21	26	10	14
(2) In general, I am satisfied with the extent of my knowledge about nutrition.	13	55	11	16	5
(3) The undergraduate curriculum for all prospective teachers should include nutrition education.	47	30	9	8	6
(4) I am satisfied with the food service program in my school.	14	36	14	20	16
(5) School food service personnel should be responsible for planning the food service program in the school.	27	41	13	14	5
(6) School administrators should be involved in planning the school food service program.	13	39	25	14	9
(7) Teachers should be involved in planning the school food service program.	12	31	19	27	11
(8) Students should be involved in planning the school food service program.	14	30	22	17	17

I T E M	RESPONSE ALTERNATIVE				
	SA	MA	U	MD	SD
(9) Parents should be involved in planning the school food service program.	9	27	16	29	19
(10) I would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at my expense).	12	19	36	3	30
(11) I would attend a nutrition training course offered in this area by the State Department of Education during the year (college credit available at my expense.)	23	13	34	6	24
(12) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop taught in this area during the year (inservice credit available).	32	25	25	8	10
(13) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop in the summer (inservice credit available).	25	26	14	8	27
(14) Having Coke and candy machines in a school discourages the children from eating balanced meals.	52	24	6	13	5

TABLE 7.8. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 2 - SECONDARY TEACHERS (GRADES 7-12)

Format: 1 - Always
2 - Usually
3 - Sometimes
4 - Seldom
5 - Never

ITEM	RESPONSE ALTERNATIVE				
	ALW	USU	SOM	SEL	NEV
(25) I eat the school lunch as provided for the students in my school.	31	30	14	16	9
(26) I have included nutrition in my classroom instructional activities this year.	36	11	20	20	13
(27) I have involved students from my classes in the food service program of the school this year (e.g., offering opinions about foods, making posters for display in the lunchroom).	2	7	19	3	69
(28) If the State Department of Education provided a guide for the teaching of nutrition as part of existing subject matter, I would use it in teaching my classes.	38	27	25	8	2
(29) School food service personnel are responsible for planning the food service program in my school.	66	22	8	2	2
(30) School administrators are involved in planning the food service program in my school.	5	14	24	29	28
(31) Teachers are involved in planning the food service program in my school.	2	0	6	10	82
(32) Students are involved in planning the food service program in my school.	3	3	10	10	74

ITEM	RESPONSE ALTERNATIVE				
	ALW	USU	SOM	SEL	NEV
(33) Parents are involved in planning the food service program in my school	3	2	3	10	82

TABLE 7.9. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 3 - FOOD SERVICE MANAGERS AND FOOD SERVICE WORKERS

Response
Format: 1 - Strongly agree
2 - Mildly agree
3 - Undecided
4 - Mildly disagree
5 - Strongly disagree

I T E M			RESPONSE ALTERNATIVE				
			SA	MA	U	MD	SD
(1) In general, I am satisfied with the extent of my knowledge about nutrition.	Managers	Control	17	33	0	17	33
		Treatment	0	25	8	42	25
	Workers	Control	21	41	0	29	9
		Treatment	12	48	4	28	8
(2) In general, I am satisfied that the other food service workers in my school know enough about nutrition.	Managers	Control	8	25	17	17	33
		Treatment	8	25	8	42	17
	Workers	Control	43	21	3	21	12
		Treatment	28	32	4	32	4
(3) I am satisfied with the food service program in my school.	Managers	Control	50	50	0	0	0
		Treatment	17	67	8	8	0
	Workers	Control	47	38	0	12	3
		Treatment	37	46	13	4	0
(4) School food service personnel should be responsible for planning the food service program in the school.	Managers	Control	50	25	8	8	9
		Treatment	50	42	0	8	0
	Workers	Control	61	12	6	9	12
		Treatment	73	19	4	4	0

ITEM			RESPONSE ALTERNATIVE				
			SA	MA	U	MD	SD
(5) School administrators should be involved in planning the school food service program.	Managers	Control	17	17	25	16	25
		Treatment	17	42	8	17	16
	Workers	Control	9	30	15	6	40
		Treatment	22	18	17	4	39
(6) Teachers should be involved in planning the school food service program.	Managers	Control	8	25	17	8	42
		Treatment	0	58	8	17	17
	Workers	Control	6	19	11	8	56
		Treatment	12	12	28	20	28
(7) Students should be involved in planning the school food service program.	Managers	Control	33	42	0	17	8
		Treatment	25	33	0	33	9
	Workers	Control	23	23	11	3	40
		Treatment	12	38	4	21	25
(8) Parents should be involved in planning the school food service program.	Managers	Control	17	25	8	8	42
		Treatment	0	25	0	42	33
	Workers	Control	3	17	15	6	59
		Treatment	8	23	15	35	19

ITEM			RESPONSE ALTERNATIVE				
			SA	MA	U	MD	SD
(9) I would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at my own expense).	Managers	Control	0	9	64	9	18
		Treatment	16	17	17	17	33
	Workers	Control	0	0	60	6	34
		Treatment	12	20	32	12	24
(10) I would attend a nutrition training course offered in this area during the year by the State Department of Education (college credit available at my own expense).	Managers	Control	18	18	37	9	18
		Treatment	8	25	17	17	33
	Workers	Control	3	3	63	11	20
		Treatment	20	4	36	12	28
(11) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop taught in this area during the year(inservice credit avail)	Managers	Control	37	27	18	9	9
		Treatment	58	33	9	0	0
	Workers	Control	37	14	40	6	3
		Treatment	23	34	31	4	8
(12) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop in the summer (inservice credit available).	Managers	Control	33	25	33	0	9
		Treatment	42	34	8	8	8
	Workers	Control	34	20	43	0	3
		Treatment	42	11	34	8	4

			RESPONSE ALTERNATIVE				
			SA	MA	U	MD	SD
(13) The Youth Advisory Council (YAC) is a good means of involving students in the school lunch program.	Managers	Control	58	33	9	0	0
		Treatment	58	33	0	9	0
	Workers	Control	28	23	40	3	6
		Treatment	46	23	16	0	15

TABLE 7.10. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 3 - FOOD SERVICE MANAGERS AND FOOD SERVICE WORKERS

Response Format:	
	1 - Always
	2 - Usually
	3 - Sometimes
	4 - Seldom
	5 - Never

ITEM			RESPONSE	ALTERNATIVE			
			ALW	USU	SOM	SEL	NEV
(34) Students in my school are encouraged to suggest menu items.	Managers	Control	8	17	41	17	17
		Treatment	17	25	25	17	16
	Workers	Control	3	6	47	18	26
		Treatment	4	4.	48	4	40
(35) Students in my school make posters for the cafeteria.	Managers	Control	17	8	25	17	33
		Treatment	0	0	33	42	25
	Workers	Control	6	3	43	14	34
		Treatment	4	4	37	13	42
(36) Students in my school serve on taste panels.	Managers	Control	0	0	9	18	73
		Treatment	8	0	25	9	58
	Workers	Control	0	0	12	6	82
		Treatment	7	4	4	4	81
(37) Students in my school are encouraged to suggest lunchroom policies or food service procedures.	Managers	Control	0	0	9	64	27
		Treatment	8	0	8	34	50
	Workers	Control	3	0	12	21	64
		Treatment	0	0	4	29	67

ITEM			RESPONSE ALTERNATIVE				
			ALW	USU	SOM	SEL	NEV
(38) Students' opinions are considered in deciding what foods will be served in the food service program in my school	Managers	Control	9	18	46	9	18
		Treatment	25	17	33	0	25
	Workers	Control	17	9	29	11	34
		Treatment	0	20	36	8	36
(39) Students in my school volunteer (unpaid) to help clean the cafeteria.	Managers	Control	9	0	36	9	46
		Treatment	17	0	8	17	58
	Workers	Control	12	9	14	12	53
		Treatment	0	4	4	12	80
(40) Students in my school volunteer (unpaid) to help in food preparation.	Managers	Control	0	0	0	9	91
		Treatment	8	0	0	0	92
	Workers	Control	3	0	6	3	88
		Treatment	0	0	0	0	100
(41) Students in my school do special studies related to the school food service program (e.g., plate waste studies).	Managers	Control	0	0	9	18	73
		Treatment	0	9	33	25	33
	Workers	Control	3	0	12	6	79
		Treatment	0	4	0	18	78

TABLE 7.11. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 4 - ADMINISTRATORS

Response Format:
1 - Strongly agree
2 - Mildly agree
3 - Undecided
4 - Mildly disagree
5 - Strongly disagree

I T E M		RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(1) I understand the purposes and in-school activities of Tennessee's Nutrition Education and Training (NET) Program.	Control	7	40	27	13	13
	Treatment	17	47	24	6	6
(2) In general, I am satisfied that the teachers in my school know enough about nutrition.	Control	0	38	17	29	16
	Treatment	6	18	29	47	0
(3) The undergraduate curriculum for all prospective teachers should include nutrition education.	Control	35	55	7	3	0
	Treatment	35	59	0	6	0
(4) I am satisfied with the food service program in my school.	Control	29	42	10	16	3
	Treatment	47	41	6	0	6

ITEM		RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(5) The school breakfast program is appropriate to offer the students in my school	Control	28	17	10	7	38
	Treatment	29	12	12	18	29
(6) The teachers in my school teach nutrition in some form.	Control	36	45	10	6	3
	Treatment	12	70	12	6	0
(7) School food service personnel should be responsible for planning the food service program in the school.	Control	39	48	7	6	0
	Treatment	47	41	12	0	0
(8) School administrators should be involved in planning the school food service program.	Control	36	36	6	19	3
	Treatment	35	35	6	6	18

I T E M		RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(9) Teachers should be involved in planning the school food service program	Control	35	29	13	13	10
	Treatment	18	18	27	23	12
(10) Students should be involved in planning the school food service program.	Control	26	45	10	16	3
	Treatment	18	41	6	23	12
(11) Parents should be involved in planning the school food service program.	Control	16	45	19	13	7
	Treatment	12	29	0	35	24
(12) The teachers in my school would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at the teachers' expense).	Control	10	16	58	6	10
	Treatment	18	18	41	6	17

ITEM		RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(13) The teachers in my school would attend a nutrition training course offered in this area by the State Department of Education during the year (college credit available at the teachers' expense).	Control	6	29	39	13	13
	Treatment	12	23	41	12	12
(14) The teachers in my school would attend a nutrition training course provided by the State Department of Education as a noncredit workshop taught in this area during the year (inservice credit available).	Control	6	45	23	16	10
	Treatment	18	35	23	12	12
(15) The teachers in my school would attend a nutrition training course provided by the State Department of Education as a noncredit workshop in the summer (inservice credit available).	Control	3	19	55	16	7
	Treatment	30	29	6	29	6

TABLE 7.12. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 4 - ADMINISTRATORS

Response Format:
1 - Always
2 - Usually
3 - Sometimes
4 - Seldom
5 - Never

ITEM		RESPONSE	ALTERNATIVE			
		ALW	USU	SOM	SEL	NEV
(31) I eat the school lunch as provided for the students in my school	Control	52	26	10	6	6
	Treatment	41	12	12	23	12
(32) If the State Department of Education provided a guide for the teaching of nutrition as part of existing subject matter, teachers in my school would use it in teaching their classes.	Control	19	48	26	7	0
	Treatment	18	47	35	0	0
(33) Students in my school are encouraged to suggest menu items.	Control	7	19	19	36	19
	Treatment	0	6	41	41	12
(34) Students in my school make posters for the cafeteria.	Control	6	13	36	32	13
	Treatment	0	6	41	53	0

ITEM			RESPONSE ALTERNATIVE				
			ALW	USU	SOM	SEL	NEV
(42) I assist the teachers in my school in teaching nutrition.	Managers	Control	0	0	27	27	46
		Treatment	17	0	17	0	66
	Workers	Control	3	3	3	12	79
		Treatment	0	0	4	11	85
(43) School food service personnel are responsible for planning the food service program in my school.	Managers	Control	50	17	17	0	16
		Treatment	33	50	8	0	9
	Workers	Control	56	15	0	6	23
		Treatment	77	4	11	0	8
(44) School administrators are involved in planning the food service program in my school.	Managers	Control	18	0	18	37	27
		Treatment	9	0	18	9	64
	Workers	Control	14	0	20	17	49
		Treatment	8	8	31	11	42
(45) Teachers are involved in planning the food service program in my school.	Managers	Control	9	0	9	36	46
		Treatment	0	0	25	8	67
	Workers	Control	6	0	9	14	71
		Treatment	0	0	11	12	77

ITEM			RESPONSE ALTERNATIVE				
			ALW	USU	SOM	SEL	NEV
(46) Students are involved in planning the food service program in my school.	Managers	Control	0	9	18	27	46
		Treatment	0	9	27	18	46
	Workers	Control	0	6	23	8	63
		Treatment	4	0	19	8	69
(47) Parents are involved in planning the food service program in my school.	Managers	Control	0	0	0	9	91
		Treatment	0	0	8	0	92
	Workers	Control	0	0	0	0	100
		Treatment	0	0	0	0	100

TABLE 7.13. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 5 - STUDENTS (GRADES 10-12)

Response Format:
1 - Strongly agree
2 - Mildly agree
3 - Undecided
4 - Mildly disagree
5 - Strongly disagree

ITEM	GRADES	RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(1) I like the quality and variety of food and the way it is served in the food service program at my school.	10	6	35	7	27	25
	11	6	36	10	33	15
	12	8	45	7	23	17
(2) The food in the cafeteria at school does not look very good.	10	27	26	9	27	11
	11	18	31	10	31	10
	12	19	26	10	32	13
(3) The food in the school cafeteria costs too much.	10	25	21	16	18	20
	11	26	21	13	24	16
	12	15	20	15	22	28
(4) It is more fun to eat away from school than to eat in the cafeteria.	10	68	15	9	5	3
	11	67	15	9	4	5
	12	72	9	10	3	6

I T E M	GRADES	RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(5) The cafeteria at my school is not a nice place to eat.	10	15	21	14	29	21
	11	10	14	13	35	28
	12	11	22	12	28	27
(6) The line in the cafeteria at my school is usually too long.	10	42	23	10	14	11
	11	29	18	12	23	18
	12	30	28	8	21	13
(7) I like to help decide what foods will be fixed for lunch at my school.	10	48	22	18	5	7
	11	31	25	25	12	7
	12	40	10	31	4	15

TABLE 7.14. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 5 - STUDENTS (GRADES 10-12)

Response
Format:
1 - Always
2 - Usually
3 - Sometimes
4 - Seldom
5 - Never

I T E M	GRADES	RESPONSE ALTERNATIVE				
		ALW	USU	SOM	SEL	N
(18) I eat the plate lunch served in the cafeteria at my school.	10	17	28	22	13	2
	11	14	32	25	17	1
	12	21	34	24	14	7
(19) I eat foods from the fast food line in the cafeteria at my school.	10	10	14	20	12	4
	11	5	15	22	10	4
	12	5	8	15	22	5
(20) I eat foods from the salad bar in the cafeteria at my school.	10	6	4	17	11	6
	11	5	6	22	11	5
	12	4	5	26	23	4
(21) I buy the foods I eat for lunch from the Coke and candy machines at my school.	10	4	6	18	23	4
	11	2	7	16	14	6
	12	1	3	18	19	5

ITEM	GRADES	RESPONSE ALTERNATIVE				
		ALW	USU	SOM	SEL	NEV
(22) I bring my lunch and eat at school.	10	2	3	12	17	66
	11	3	4	11	15	67
	12	3	4	12	14	67
(23) I eat my lunch at home.	10	3	4	10	6	77
	11	5	7	9	10	69
	12	2	3	12	10	73
(24) I eat lunch at a store or restaurant away from my school.	10	8	8	14	14	56
	11	7	7	15	20	51
	12	3	7	24	25	41
(25) Students at my school participate in a Youth Advisory Council (YAC) or other student organization that helps plan school lunches.	10	11	3	6	11	68
	11	9	3	7	9	72
	12	8	4	8	8	72

ITEM	GRADES	RESPONSE ALTERNATIVE				
		ALW	USU	SOM	SEL	NEVE
(26) I help decide what foods will be served for lunch at my school.	10	3	1	4	5	87
	11	2	1	5	4	88
	12	0	2	7	6	85
(27) I learn at school about foods that are good for me.	10	6	13	23	25	33
	11	5	8	25	22	40
	12	2	17	26	19	36

I T E M		RESPONSE	ALTERNATIVE			
		ALW	USU	SOM	SEL	NEV
(35) Students in my school serve on taste panels.	Control	7	0	3	13	77
	Treatment	0	0	18	23	59
(36) Students in my school are encouraged to suggest lunchroom policies or food service procedures.	Control	3	13	29	19	36
	Treatment	0	6	30	35	29
(37) Students' opinions are considered in deciding what foods will be served in the food service program in my school.	Control	6	23	39	13	19
	Treatment	0	29	47	12	12
(38) Students in my school volunteer (unpaid) to help clean the cafeteria.	Control	26	10	19	6	39
	Treatment	12	23	24	6	35

ITEM		RESPONSE	ALTERNATIVE			
		ALW	USU	SOM	SEL	NEV
(39) Students in my school volunteer (unpaid) to help in food preparation.	Control	0	3	3	3	91
	Treatment	0	6	0	18	76
(40) Students in my school do special studies related to the food service program (e.g., plate waste studies).	Control	0	3	20	20	57
	Treatment	0	6	12	29	53
(41) School food service personnel are responsible for planning the food service program in my school.	Control	45	52	3	0	0
	Treatment	53	35	6	0	6
(42) School administrators are involved in planning the food service program in my school.	Control	6	26	29	23	16
	Treatment	6	12	35	18	29

ITEM		RESPONSE ALTERNATIVE				
		ALW	USU	SOM	SEL	NEV
(43) Teachers are involved in planning the food service program in my school.	Control	0	3	19	36	42
	Treatment	0	6	12	41	41
(44) Students are involved in planning the food service program in my school.	Control	0	16	23	26	35
	Treatment	0	6	12	35	47
(45) Parents are involved in planning the food service program in my school.	Control	0	3	6	32	58
	Treatment	0	6	6	18	70

TABLE 7.15. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 6 - STUDENTS (GRADES 7-9)

Response Format:

1 - Strongly agree
2 - Mildly agree
3 - Undecided
4 - Mildly disagree
5 - Strongly disagree

ITEM	GRADE	RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(1) I like the quality and variety of food and the way it is served in the food service program at my school.	7	9	27	12	25	27
	8	6	31	14	24	25
	9	9	38	8	26	19
(2) The food in the cafeteria at school does not look very good.	7	24	30	12	22	12
	8	25	24	13	24	14
	9	20	26	14	26	14
(3) The food in the school cafeteria costs too much.	7	30	17	20	12	21
	8	28	16	20	20	16
	9	24	21	20	17	18
(4) It is more fun to eat away from school than to eat in the cafeteria.	7	55	17	18	4	6
	8	67	14	9	5	5
	9	62	13	11	7	7

ITEM	GRADE	RESPONSE ALTERNATIVE				
		SA	MA	U	MD	SD
(5) The cafeteria at my school is not a nice place to eat	7	13	15	15	26	31
	8	9	19	20	23	29
	9	10	14	15	26	35
(6) The line in the cafeteria at my school is usually too long.	7	46	19	8	17	10
	8	38	23	12	14	13
	9	45	18	8	16	13
(7) I like to help decide what foods will be fixed for lunch at my school.	7	54	17	18	7	4
	8	49	19	25	3	4
	9	34	25	25	9	7

TABLE 7.16. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 6 - STUDENTS (GRADES 7-9)

Response
Format:
1 - Always
2 - Usually
3 - Sometimes
4 - Seldom
5 - Never

ITEM	GRADE	RESPONSE ALTERNATIVE				
		ALW	USU	SOM	SEL	NEV
(18) I eat the plate lunch served in the cafeteria at my school.	7	32	29	24	10	5
	8	26	35	21	10	8
	9	16	30	24	20	10
(19) I eat foods from the fast food line in the cafeteria at my school.	7	7	6	17	7	63
	8	4	12	17	7	60
	9	3	17	21	11	48
(20) I eat foods from the salad bar in the cafeteria at my school.	7	4	4	12	7	73
	8	3	4	9	8	76
	9	2	7	18	10	63
(21) I buy the foods I eat for lunch from the Coke and candy machines at my school.	7	3	1	9	8	79
	8	4	5	9	9	73
	9	3	4	19	12	62

ITEM	GRADE	RESPONSE ALTERNATIVE ALW	USU	SOM	SEL	NEV
(22) I bring my lunch and eat at school.	7	4	4	20	16	56
	8	4	5	15	23	53
	9	1	1	8	15	75
(23) I eat my lunch at home.	7	4	3	8	8	77
	8	2	3	9	9	77
	9	1	2	6	9	82
(24) I eat lunch at a store or restaurant away from my school.	7	1	2	6	6	85
	8	2	3	6	5	84
	9	6	3	5	9	78
(25) Students at my school participate in a Youth Advisory Council (YAC) or other student organization that helps plan school lunches.	7	2	1	10	9	78
	8	1	3	5	7	84
	9	9	3	9	8	71

ITEM	GRADE	RESPONSE ALTERNATIVE				
		ALW	USU	SOM	SEL	NEV
(26) I help decide what foods will be served for lunch at my school.	7	1	1	6	6	86
	8	1	1	5	8	85
	9	1	2	2	2	93
(27) I learn at school about foods that are good for me.	7	11	10	30	19	30
	8	8	15	33	26	18
	9	3	14	29	24	30

TABLE 7.17. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 7 - STUDENTS (GRADES 4-6)

Response Format:	
1 -	I like it a lot
2 -	I like it a little bit
3 -	I do not like it very much
4 -	I do not like it at all

ITEM	Experimental Condition	RESPONSE ALTERNATIVE			
		1	2	3	4
(1) How do you feel about the food that is fixed for lunch at your school?	Control	24	53	15	8
	Treatment	22	54	12	12
(2) How do you feel about learning about foods that are good for you?	Control	63	28	6	3
	Treatment	57	31	8	4
(3) How do you feel about helping decide what food you will have for lunch at your school?	Control	65	24	8	4
	Treatment	65	23	7	5

TABLE 7.18. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 7 - STUDENTS (GRADES 4-6)

Response
Format: 1 - Often
2 - Sometimes
3 - Never

ITEM	Experimental Condition	RESPONSE ALTERNATI		
		Often	Some-times	Never
(14) How often do you eat the lunch fixed at your school?	Control	61	35	4
	Treatment	60	35	5
(15) How often do you help someone at your school decide what will be served for lunch at your school?	Control	10	24	66
	Treatment	11	25	64
(16) How often do you learn from your teacher about foods that are good for you?	Control	34	49	17
	Treatment	44	46	10
(17) How often do you learn from someone at home about foods that are good for you?	Control	51	40	9
	Treatment	50	41	9

TABLE 7.19. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 8 - STUDENTS (GRADES 2-3)

Response

Format: 1 - I like it.

2 - I do not like it or dislike it.

3 - I do not like it.

ITEM	Experimental Condition	RESPONSE ALTERNATIVE		
		1	2	3
(1) How do you feel about the food that is fixed for lunch at your school?	Control	63	29	8
	Treatment	67	29	4
(2) How do you feel about learning about foods that are good for you?	Control	86	12	2
	Treatment	88	11	1
(3) How do you feel about helping decide what food you will have for lunch at your school?	Control	46	42	12
	Treatment	62	30	8

TABLE 7.20. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 8 - STUDENTS (GRADES 2-3)

Response
Format: 1 - Yes (You sometimes do this.)

2 - No (You usually do not do this.)

ITEM	Experimental Condition	RESPONSE ALTERNATIVE	
		Yes	No
(9) Do you eat the lunch fixed at your school?	Control	89	11
	Treatment	87	13
(10) Do you help someone at your school decide what will be served for lunch?	Control	25	75
	Treatment	26	74
(11) Do you learn from your teacher about foods that are good for you?	Control	91	9
	Treatment	91	9
(12) Do you learn from someone at home about foods that are good for you?	Control	81	19
	Treatment	83	17

TABLE 7.21. PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 9 - STUDENTS (GRADES K-1)

Response Format:

☹ 1 = Sad (I do not like it.)

☺ 2 = Happy (I like it.)

Item	Experimental Condition	Response Alternatives	
		2	1
(1) How do you feel about the food that is fixed for lunch at your school?	Control	85	15
	Treatment	89	11
(2) How do you feel about learning about food that are good for you?	Control	90	10
	Treatment	88	12
(3) How do you feel about helping decide what food you will have for lunch at your school?	Control	80	20
	Treatment	81	19

Response Format:

1 = Square = NO (I usually do not do this.)

2 = Star = YES (I sometimes do this.)

Item	Experimental Condition	Response Alternatives	
		2	1
(9) Do you eat the lunch fixed at your school?	Control	83	17
	Treatment	86	14
(10) Do you help someone at your school decide what will be served for lunch?	Control	39	61
	Treatment	44	56
(11) Do you learn from your teacher about foods that are good for you?	Control	83	17
	Treatment	83	17
(12) Do you learn from from someone at home about foods that are good for you?	Control	76	24
	Treatment	77	23

SUMMARY

During 1979-80 student nutrition competencies were developed for Tennessee and instruments were designed to measure those competencies in Grades K-12. In April and May 1980 the evaluators sent field assistants to elementary and secondary schools in every development district in the State to collect baseline data on nutrition knowledge, attitudes, and practices, and perceptions of nutrition education from students, their teachers, their parents, school administrators, and school food service personnel. Two of the four elementary schools in each development district were designated "treatment" schools because a team of educators from those schools was to receive training in nutrition education during Summer 1980. Two of the four elementary schools were designated "comparison" or control schools because no training in nutrition education was offered to personnel in those schools during 1980 (though priority placement in Summer 1981 workshops was promised). All secondary schools were comparison schools.

No systematic differences between responses of students in treatment and comparison schools were detected in the initial testing. Follow-up assessment at the same schools in April and May 1981 will yield scores for comparison with the baseline data collected in April and May 1980. It is hypothesized that the nutrition education presented in the Summer 1980 workshops will be transmitted to students in treatment schools and will result in greater gains for those students than for control school students on the tests based on Tennessee's nutrition competencies.

When students in Grades 2-12 were asked in Spring 1980 what changes, if any, they would make in their school lunch program, elementary students most often requested a greater variety of foods (such as hamburgers, pizza, different vegetables, more fruit, ice cream and other desserts) and higher quality foods. Students in Grades 7-12 also were interested in increasing the variety and quality of food served, but were more concerned about changing procedures in the cafeteria: having more choices such as a salad bar, a choice of drinks including carbonated beverages, a voice in planning the school menu, faster service, lower prices, a cleaner more pleasant cafeteria.

Observation of plate waste in treatment and comparison schools revealed that in Spring 1980 students in Tennessee wasted from 11 percent (of their milk) to 40 percent (of their raw vegetables) of the food served to them in the school lunch room. Following milk, the most acceptable food groups were the main dish (19% wasted), fruit (21% wasted), and dessert (21% wasted). Vegetables were not as well accepted, with plate waste ranging from 29 percent for starchy vegetables to 40 percent for raw vegetables. Plate waste in Grades K-2 was high, perhaps indicating that the portions served at those levels were too large. The percentage of food wasted in the main dish and bread categories dropped sharply at Grade 6, coinciding with the onset of puberty for those students. Plate waste of starchy vegetables dropped appreciably at Grade 9, reflecting teenagers' preferences for these foods. Perhaps because teenage girls are particularly weight conscious, desserts constituted the least acceptable food category in Grades 11 and 12.

Responses of parents and of educators to questions concerning their perceptions of nutrition education indicated that they felt their knowledge of nutrition was inadequate and that they wanted to learn more about it. They also expressed interest in becoming more involved in nutrition education activities in the schools. The approval rate for food service programs in Tennessee's schools was less than 50 percent among these adult respondents.

Most students, too, felt school food service programs warranted improvement, and they wanted to have a part in improving the quality, variety and presentation of foods in their cafeterias.

Spring 1980 assessment data provided a very hospitable milieu for nutrition education in 1980-81. No more than half of the teachers involved in the assessment felt they understood the purposes of Tennessee's NET Program, yet they were interested in learning more about NET and more about nutrition. No more than half of all adults surveyed were happy with school food service programs, but many were willing to work to make needed improvements. Likewise, a majority of students felt improvements were necessary and wanted to help in the process. Both adults and students seemed ready and willing to increase their knowledge of nutrition through nutrition education activities.

APPENDIX A

CONGRUENCE BETWEEN NEEDS AND OBJECTIVES

CONGRUENCE BETWEEN NEEDS AND OBJECTIVES

Sheldon Clark

After examining Tennessee's nutrition needs assessments for 1978, 1979 and 1980, and then trying to relate the identified needs to the objectives of the NET Program, the evaluators have two major concerns. First, the focus of almost all of the needs identified is the student, whereas few of the subgoals or objectives in the 1980 plan deal with behaviors of students. The second concern is perhaps an extension of the first: many of the needs identified in the needs assessments are not addressed directly in the program objectives. Although one might infer that some of these needs are being addressed in one or more of the program objectives, it would be advisable to deal with each of the identified needs more directly.

In the following listing, an attempt has been made to draw some examples from each of the years for which needs assessments were available. The page references cited represent the source of the question in the needs assessment section of the state plan for the year identified.

FY 1980

A. "Poor food habits" (p. 1) of Tennessee children is cited as a priority problem. Since poor food habits is a statement of student behavior, it would seem appropriate that student behaviors should be the focus of program goals and objectives.

B. The five "significant nutrition-related health problems" (p. 3) identified are not addressed directly in the objectives. Though one might assume that improvement will take place as a result of related program thrusts, it is recommended that these needs be addressed explicitly in the objectives - again, in terms of student behaviors, since the problems are stated in those terms.

C. The need for "affective techniques" in nutrition education is identified as being a concern of teachers (p. 7), but none of the objectives explicitly addresses this need.

D. "Learning labs" (p. 10) are mentioned several times as being desirable methods of getting students involved in nutrition-related activities, but learning labs are not mentioned as such in the objectives.

E. Regarding "student involvement in school food service activities" (pp. 11-12), there seems to be no provision for such involvement in the objectives, although the need for it is well documented in the needs assessment.

F. Although "parental habits" are identified as a source of problems (p. 14), parental behaviors are not the subject of an objective.

FY 1979

A. Needs for "an identification system for children who need special help with their nutritive status" and an "increased involvement of older students in decisions regarding school feeding programs" are raised (pp. 13, 23, 24) but never met head-on in the objectives. The second need in particular should be addressed in an objective stated in terms of student behaviors.

B. "Over and under-consumption" (p. 16) also should be dealt with through student behaviors.

C. "Improved personal eating habits" for teachers (p. 24) should be the topic of an objective, perhaps within the same objective as the personal eating habits of students and parents.

D. The issue that nutrition education should be required as part of the training for all teachers (p. 27) needs to be addressed in some manner. If such a goal is beyond the scope of this project, perhaps a statement to that effect would be appropriate.

FY 1978

A. The need for teachers to have "increased contact with nutrition specialists" is pointed out (p. 11). This increased contact might result from supplying the nutritionists with more knowledge and materials, but this outcome is not guaranteed given the present statement of objectives.

APPROPRIATENESS OF OBJECTIVES

Many of the evaluators' concerns about the stated subgoals or objectives of the NET Program are reflections of problems identified in the previous section, and, as such, can be rectified in the same revision process. As written in the 1980 State NET Plan, the primary goal and five subgoals are process-oriented and quite broad. As a result, they are difficult to evaluate. Although certainly commendable goals, how will one determine to what extent "Tennessee children ... understand the relationship of food, nutrition, and total health," or how well the NET Program has achieved "school, home and community support for a cooperative, coordinated nutrition education program"?

Some of the objectives listed under the subgoals pose another kind of concern: although almost all of these objectives are stated in terms which would allow an evaluator to answer "Yes" or "No" to the question, "Was this objective fulfilled, as stated?", too many fail to make proper provisions for insuring that the intent of the objective, as related to its relevant subgoal, is being met. That is, there should be methods of quality control built into the objectives themselves, not restricted solely to the "Evaluation" column.

Ideally, goals and objectives are broad enough to insure that real needs are being addressed, and evaluation-specific enough so that progress toward their achievement may be objectively assessed. Goals and objectives should be cohesive; that is, the objectives which fall under a specific goal should comprise a logical subset of that goal. If approached in this manner, the relative success in achieving a goal can be ascertained by evaluating the extent to which the underlying objectives have been met, since they are all interrelated.

Two aids have been formulated to facilitate the construction of goals and objectives. The first is a list of words drawn from the 1980 objectives which are examples of those words which should be operationally defined when used in statements of objectives. These examples indicate the types of words which need such definitions. The second aid is a list of questions which can be asked to help assess the appropriateness of a goal or objective.

EXAMPLES OF WORDS/PHRASES NEEDING OPERATIONAL DEFINITIONS

WORD/PHRASE	FY 1980 GOAL REFERENCE	COMMENT
1. "involved with the team approach"	1.1	1. Does "involved with" mean that they completed the training, carried out the BHAP, participated in all follow-up activities?
2. "expand"	1.3	2. Would a NETSW-trained teacher who taught one class in 1979 and two in 1980 constitute an expansion, or would another teacher have to be involved?
3. "reached"	1.5	3. Does "reached" mean "attended the workshop," or can a letter fulfill the objective?
4. "developed"	2.1	4. What constitutes "developed"? Drafted? Printed? Submitted for approval (to whom?)? Printed and distributed?
5. "be informed"	2.4	5. By "inform," could we say that they "will be sent promotional literature," so the actual receiving and reaching is not an issue?

WORD/PHRASE	FY 1980 GOAL REFERENCE	COMMENT
6. "will receive"	3.1	6. "Receive" is hard to assess; "will be sent" is not.
7. "materials available"	3.3	7. Number of different titles, or do multiple copies of the same title count more than once?

GUIDING QUESTIONS FOR GOALS AND OBJECTIVES

A. GOALS

1. Which target group is the focus of the goal?
    - a. What is the relative importance of this target group, as stated in the needs assessment?
    - b. What other groups (besides the target group) are involved in the goal?
2. What need(s) identified in the needs assessment is (are) being addressed?
3. Is the goal stated in such a manner that one can deduce which objectives should comprise its foundation?
4. Is this goal distinct from the other goals, or could it logically be combined with another?
5. If all the objectives that are listed under this goal are met, can it be said that the goal has been successfully achieved?

B. OBJECTIVES

1. Is this objective a logical component of the goal of which it is a part? If not,
    - a. should a new goal be created, or
    - b. does it belong with another goal?
2. Does the objective describe an outcome of an effort, rather than the process used to achieve the outcome?
3. Is the objective stated in terms that describe the behavior of the target group, rather than the behavior of the group that may be involved in the process of encouraging that behavior?
4. Does the objective describe the behavior of the target group in terms that are observable and measurable?

  a. Does the measurement have a component of quality control?
  b. Is the measurement practical?
  c. Have terms been operationally defined when needed?

5. Does the objective describe a minimum level of performance that is deemed necessary for satisfactory attainment of the objective?

  a. Is this level reasonable?
  b. Has this level been described in terms of the proposed measurement?

APPENDIX B

NUTRITION EDUCATION TEAM PROJECT ON-SITE EVALUATION

NUTRITION EDUCATION TEAM PROJECT
ON-SITE EVALUATION

card col

Name of Monitor: ______________________________ (1-3)

Position of Monitor: ______________________________ (4-5)

Date(s) of Visit(s): ______________________________ (6)

Total time spent observing team members: ______________________ (7-9)

The purpose of this evaluation is to furnish information to Nutrition Education Training Program personnel about:

(a) the usefulness of the spring Introductory Conference for administrators;
(b) the progress and success of "back home" team projects, including evidence of a team effort in its implementation; and
(c) the extent to which the team projects have contributed to the involvement of others in nutrition education.

Your thoughtful cooperation in providing this information will be greatly appreciated.

A. GENERAL INFORMATION

1. Names of team members being evaluated: ______________________ (10-12

____

2. School affiliation of team members: ______________________

3. Do your regular job responsibilities include opportunities to observe one or more members of this team in their work? (Check one)

Yes ______ (13)

No ______

B. ORIENTATION AS A MONITOR

4. Did you attend the Nutrition Education Training Program (NETP) Introductory Conference in the spring of 1979? (Check one)

Yes ______ (14)

No ______

Some of the rest of the items in this questionnaire request that you indicate the extent to which you agree or disagree with a statement. For such items, the following abbreviations will be used for response options:

SA = Strongly Agree
A = Agree
NS = Not Sure
D = Disagree
SD = Strongly Disagree

Indicate the desired response by entering a check in the appropriate column.

	SA	A	NS	D	SD	
5. I am familiar with the Tennessee Nutrition Education Training Program, its goals and objectives.						(15)
6. I feel confident in my role as monitor of the activities of this particular team.						(16)
7. Much of my confidence as a monitor is attributable to knowledge that I gained during the Introductory Conference held in the spring.						(17)
8. Someone else could evaluate this project more adequately than I. *Specify the position of such a person if you entered a check in column SA or A. ____________________						(18)

C. BACK HOME ACTION PLAN (BHAP)

9. Do you have a copy of this team's Back Home Action Plan (BHAP)? (Check one)

Yes ______ (19)

No ______

If so, how long have you had it? ____________________ (20-21)

Indicate the desired response by entering a check in the appropriate column.

	SA	A	NS	D	SD	
10. I understand the BHAP of this team.						(22)
11. The over-all goal of this BHAP, as set forth in its initial problem statement, is a worthwhile one.						(23)
12. The "Action Planning Guide for Back Home Nutrition Education Team Project" (the form in which the BHAP is contained) was a useful tool in helping these team members specify desirable outcomes and plan realistic steps to achieve these outcomes.						(24)

13. Please indicate which Action Steps, as listed in the Back Home Action Plan (pages I-121 and I-122), have been completed by this team. (List only the step numbers corresponding to completed steps.)

____ (25-26)

14. Which Action Steps, as listed in the BHAP, have not been completed by this team? (Again, list only the numbers corresponding to the steps which have not been completed.)

____ (27-28)

15. Were you told which Action Step the team would be implementing during your visit? (Check one)

Yes ________ (29)

No ________

16. Which Action Step was implemented during your visit? (Please list only the step number, as listed in pages I-121 and I-122 in the BHAP.)

________ (30-31)

17. The Action Step which I observed achieved the expected outcome, as identified in the BHAP. (Check one)

_____ SA _____ A _____ NS _____ D _____ SD (32)

18. The Action Step which I observed is a good indication of the over-all success of this team's BHAP. (Check one)

_____ SA _____ A _____ NS _____ D _____ SD (33)

19. How would you rate the over-all success of this BHAP? (Check one)

______	______	______	______	______	(34)
Very Successful	Somewhat Successful	Not Sure	Somewhat Unsuccessful	Very Unsuccessful	

20. On the basis of what you have observed, how confident are you of this rating? (Check one)

______	______	______	______	______	(35)
Very Confident	Somewhat Confident	Neither Confident nor Doubtful	Somewhat Doubtful	Very Doubtful	

D. TEAMWORK

21. Were both team members involved in the Action Step that you observed? (Check one)

Yes ______ (36)

No ______

If not, which team member was not involved? (Check one, if applicable)

Teacher ______ (37)

Food Service Manager ______

22. These team members worked together effectively. (Check one)

______	______	______	______	______	(38)
SA	A	NS	D	SD	

23. On the basis of what you have observed, please estimate the percentage of the effort associated with implementing this plan in its entirety which will have been done by the teacher.

______% (39-40)

What percentage will have been done by the food service manager?

______% (41-42)

E. ADDITIONAL COMMENTS

____

____

____

____

Please return this completed evaluation to:

Dr. Trudy Banta
Bureau of Educational Research and Service
212 Claxton Education Building
The University of Tennessee
Knoxville, Tennessee 37916

APPENDIX C

NET PILOT PROPOSALS RECOMMENDED FOR FUNDING
1979-80

NUTRITION EDUCATION & TRAINING PROGRAM-PILOT PROPOSALS

RECOMMENDED FOR FUNDING

1979-1980

[Listed Alphabetically]

Public School Systems

		THRUST OF PROJECT	
1.	Carroll County	Joint training for School Food Services Personnel in 4 small systems (3 without food service supervisors)	$13,639
2.	Cheatham County	Training for kindergarten students in 6 pilot schools	338
3.	Knoxville City	Reaching teens through nutrition education via teachers (to increase teachers' knowledge & confidence)	12,000
4.	McNairy County	To reach students to develop nutrition awareness & the selection of intelligent meal components	1,208
5.	Memphis City	Development of nutrition education program for mentally retarded children - Extension of USDA Section 18 project at Child Development Center	Recommended funding $15,000 (Requested:$36,
6.	Metro - Davidson Co.	With Agricultural Marketing Project "Food Education Program" - development of a sequential program for Gr. 5-6 students using a holestic approch. 24 model packets for teachers to be provided.	$12,696.75
7.	Putnam County -	With Tennessee Tech. "A Multidirectional Approach to Nutrition Education of Children" Outreach to 14 county area of Upper Cumberland. Awareness activities for many. Workshops for School Food Services Staff & coaches at August 2-day inservice held at Tech; grad. course in nutrition education; a model school project.	$14,794.7

Private Schools - Special Schools

8.	Orange Grove (Chattanooga)	To develop nutrition education program for primary level (6-14 yrs) mentally retarded children, focus on prevocational skills & parent involvement.	Recommended funding $10, (Requested: $25,027)

Day Care

9.	Progress for People (Cleveland-Hiwassee)	Joint project of Cleveland Day Care (5 centers) & Progress for People, HEAD START (13 centers in 9 rural counties) To provide workshops, hire 1 para-professional & build on Clinch-Powell Home Assessment Data. Video tapes to be made.	$20,503
		TOTAL:	$100,179.45

APPENDIX D

TREATMENT SCHOOLS

ALL SCHOOLS PARTICIPATING IN SPRING 1980 NET ASSESSMENT

TREATMENT SCHOOLS

Mr. Danny D. Brown, Principal
Rock Creek Elementary School
Rt. 1, Box 7
Estill Springs, TN 37330
649-5435

Mr. Bill Bowers, Principal
Baker Elementary School
Hampshire Pike
Columbia, TN 38401
388-3319

Ms. Maureen Hodges, Principal
Crossville Elementary School
914 W. Fourth St.
Crossville, TN 38555
484-6635

Andy Harbison
South Polk Elementary School
Old Fort, TN 37362
338-2841, ext. 239

Mr. Carl Brown
Pikeville Elementary School
P.O. Box 369
Pikeville, TN 37367
447-2457

Mr. Don Johnson, Principal
McFadden Elementary School
221 Bridge Ave.
Murfreesboro, TN 37130
893-7251

Mr. Ray Byrd, Principal
Gladeville Elementary School
Gladeville, TN 37071
444-5694

Ms. Dorothy P. Griffey, Principal
Brownlow Elementary School
1305 Luttrell School
Knoxville, TN 37917
525-3187

Paul Scarbough
Oakdale Elementary School
Wartburg, TN 37887
369-3885

Ms. Pauline Elliott, Principal
Alamo Elementary School
Conley Road
Alamo, TN 38001
901-696-5583

Mr. Bill Emerson, Superintendent
Bells City Schools
Bells Elementary School
Box A
Bells, TN 38006
901-663-2481

Sharon Herron
Rock Springs Elementary School
Rt. 17, Moreland Drive
Kingsport, TN 37764
239-5143

Reba Robinette
Madison Elementary School
200 Greenway
Kingsport, TN 37660
245-2512

Mr. James Fleming
Brownsville Road Elementary School
5292 Banbury Road
Memphis, TN 38134
901-386-6921

Ms. Nancy Holmes
Raineshaven Elementary School
4301 Van Road
Memphis, TN 38109
901-398-2020

Mr. Ernest Golden
Denmark Elementary School
Rt. 1
Denmark, TN 38391
901-427-5986

Dr. Billie Belew, Principal
Paul Caywood School
102 Monroe Street
Lexington, TN 38351
901-968-8457

Mr. Michael Krabousanos, Principal
Crab Orchard Elementary School
Crab Orchard, TN 37723
484-7400

NET, NEO SCHOOLS, 1980

Attached are the following items:

1. A complete list of schools which participated in the Spring, 1980 nutrition education assessment.

2. A list of field assistants who participated.

3. A list of personnel in School Food Services who may have assisted in the selection and recruitment of schools. Many people assisted in the initial identification of participating schools. Experience suggests that the identification of one person in the district to assume responsibility for coordination and communication in that district would be helpful and in some cases is required (Developmental Districts 4 and 9). Helen Minns should be asked who to contact next year in districts where the name(s) of the people are not known (as indicated on the first list--upper right-hand corner).

Comparison and Treatment Schools: Developmental District # 1

Personnel in district who helped in the selection/recruitment of schools: Pat Testor, 323-4181

Nancy Duckworth, 639-6871 (Greene County)

Code	Contact person/school/address	County	Phone No.	Grades:		Status: C/T	Field Assistant assigned to test	People hel in school, known
				a. in school	b. tested			
05	Mrs. Katrina Quillan Indian Springs Elem. School Rt. 13, 333 Hill Rd. Kingsport, TN 37664	Sullivan	323-8832	K-6	K,3,5	C	J. Kirkendol	Quillan
33	Mr. Buford Neas Nolachuckey School Rt. 4 Greenville, TN 37743	Greene	639-7731	K-6	1,2,4,6	C	B. Owensby	Neas; Food Svc. Manag & workers
02	Mr. William Bowman Jonesboro Middle School 308 Forest Drive Jonesboro, TN 37659	Washington	753-4681	5-8	6,7,8	C	J. Kirkendol	Bowman; Fo Svc. Mgr.
34	Mr. Hal Pruitt West Greene High School Mosheim, TN 37818	Greene	422-4061	9-12	9-12	C	K. Clark	
01	Ms. Sharon Herron Rock Springs Elem. School Rt. 17, Moreland Drive Kingsport, TN 37764	Sullivan	239-5143	K-6	1,2,4	T	T. Martin	
04	Ms. Reba Robinette Madison Elementary School 200 Greenway Kingsport, TN 37660	Sullivan	245-2512	K-5	K,3,5	T	T. Martin B. O'Neill	

Comparison and Treatment Schools: Developmental District # 2

Personnel in district who helped in the selection/recruitment of schools: ______________________

____

Code	Contact person/school/address	County	Phone No.	Grades:		Status: C/T	Field Assistant assigned to test	People hel in school, known
				a. in school	b. tested			
13	Mr. David Wetzel East Knox County Elem. School 9315 Rutledge Pike Mascot, TN 37806	Knox	933-3493	K-8	1,2,4,6, 7,8	C	B. Owensby	Wetzel; Foo Svc. Mgr. & workers
41*	Mr. David Cook Chilhowee View Elem. School Wilkinson Pike Maryville, TN 37801	Blount	982-1862	K-5	K,3,5	C	K. Clark	
09	Mr. Paul Scarbrough Oakdale High School Wartburg, TN 37829	Morgan	369-3885	9-12	9-12	C	K. Bartosz	
10	Mr. Paul Scarbrough Oakdale Elem. School Wartburg, TN 37829	Morgan	369-3885	K-8	1,2,4,6	T	J. Wycoff	
08	Ms. Dorothy P. Griffey Brownlow Elem. School 1305 Luttrell St. Knoxville, TN 37917	Knox	525-3187	K-6	K,3,5	T	M.L. Rumage	Griffey; secretary

* change code, duplicate of pilot

Comparison and Treatment Schools: Developmental District # 3

Personnel in district who helped in the selection/recruitment of schools: Barbara Chambers, Blount County

Code	Contact person/school/address	County	Phone No.	Grades:		Status: C/T	Field Assistant assigned to test	People he in school known
				a. in school	b. tested			
11	Mr. Charles Reed Copper Hill Elem. School Drawer U Copperhill, TN 37317	Polk	496-3341 ext. 252	K-8	K,3,5,7,8	C	L. Roberts	Reed
14	Mr. Danny E. Rodgers Copper Basin High School P.O. Box 909 Copperhill, TN 37317	Polk	494-3341 ext. 260	9-12	9-12	C	L. Roberts	Rodgers
24	Mr. David Bayless Mary V. Wheeler Elem. School Rt. 4 Pikeville, TN 37367	Bledsoe	881-3394	K-8	1,2,4,6	C	S. Hurst	Bayless
17	Mr. Andy Harbison South Polk Elem. School Old Fort, TN 37362	Polk	338-2841	K-8	K,3,5	T	L. Roberts	
27	Mr. Carl Brown Pikeville Elem. School P.O. Box 369 Pikeville, TN 37367	Bledsoe	477-2457	K-8	1,2,4,6	T	S. Hurst	Brown

Comparison and Treatment Schools: Developmental District # 4

Personnel in district who helped in the selection/recruitment of schools: Vera Wallace, 484-6135

Code	Contact person/school/address	County	Phone No.	Grades:		Status: C/T	Field Assistant assigned to test	People help in school, known
				a. in school	b. tested			
44	Ms. Maureen Hodges Crossville Elem. School Fourth St. Crossville, TN 38555	Cumberland	484-6635	K-3	K,1,2,3	T	L. Roberts	Hodges
47	Mr. Jerry Robinson Glen Martin Junior High 314 S. Miller Ave. Crossville, TN 38555	Cumberland	484-7547	7,8,9	7,8,9	C	L. Roberts	Robinson
45	Mr. Dane Sorrell *Cumberland Elem. School Crossville, TN 38555	Cumberland	484-5579	4,5,6	4,5,6	T	L. Roberts	Sorrell; teachers
46	Ms. Reba Reed Pamona Elem. School Rt. 9, Box 277 Crossville, TN 38555	Cumberland	484-4836	K-6	K-6	T	K. Bartosz K. Byrum	

* to merge with Crossville Elementary School, Fall, 1980

Comparison and Treatment Schools: Developmental District # 5

Personnel in district who helped in the selection/recruitment of schools: Dorothy Beeler, 794-1831 (Williamson Co.)
Pauline Blankenship, 893-9110 (Murfreesboro City Schools)

Code	Contact person/school/address	County	Phone No.	Grades:		Status: C/T	Field Assistant assigned to test	People he in school, known
				a. in school	b. tested			
28	Mr. Jesse Frank Lipscomb Elem. School Rt. 1 Brentwood, TN 37027	Williamson	794-3022	K-6	1,2,4,6	C	M. Lunden	Frank
25	Mr. Frank Turner Hobgood Elem. School 307 Baird Lane Murfreesboro, TN 37130	Rutherford	893-2314	K-6	K,3,5	C	T. Martin	
30	Mr. Ken Springer Fairview High School Rt. 1 Fairview, TN 37062	Williamson	799-2614	7-12	7-12	C	M. Lunden	Springer
35	Mr. Don Johnson McFadden Elem. School 221 Bridge Ave. Murfreesboro, TN 37130	Rutherford	893-7251	K-6	K,3,5	T	M. Lunden	Johnson
37	Mr. Ray Byrd Gladeville Elem. School Gladeville, TN 37071	Wilson	444-5694	K-6	1,2,4,6	T	M. Lunden	Byrd

Comparison and Treatment Schools: Developmental District # 6

Personnel in district who helped in the selection/recruitment of schools: ______________________

____

Code	Contact person/school/address	County	Phone No.	Grades: a. in school	Grades: b. tested	Status: C/T	Field Assistant assigned to test	People hel in school, known
31	Mr. Willard Davis Minor Hill Elem. School Box 99 Minor Hill, TN 38473	Giles	565-3117	K-8	1,2,4,6	C	M.L. Rumage	Davis
38	Mr. Larry Duvall Hampshire Elem. School Hampshire, TN 38461	Maury	285-2300	K-12	K,3,5,7,8	C	M.L. Rumage	Secretary
36	Mr. Wayne Hobbs Richland High School Rt. 1 Lynnville, TN 37206	Giles	527-3577	9-12	9-12	C	M.L. Rumage	Teachers
06	Mr. Danny D. Brown Rock Creek Elem. School Rt. 1, Box 7 Estill Springs, TN 37330	Franklin	649-5435	K-6	K,3,5	T	S. Hurst	Brown
02	Mr. Bill Bowers Baker Elem. School Hampshire Pike Columbia, TN 38401	Maury	388-3319	K-6	1,2,4,6	T	S. Hurst	Bowers; secretary

Comparison and Treatment Schools: Developmental District # 7

Personnel in district who helped in the selection/recruitment of schools: Mrs. Costello, 784-4672

Code	Contact person/school/address	County	Phone No.	Grades: a. in school	Grades: b. tested	Status: C/T	Field Assistant assigned to test	People he in school, known
20	Mr. James B. Garner Maury City Elementary School Box 68 Maury, TN 38050	Crockett	901 656-2274	K-3	1,2	C	L. Adams	Garner
22	Mr. James B. Garner Maury City High School Box 68, College Street Maury, TN 38050	Crockett	901 656-2244	4-12	4,6,7,8,9, 10,11,12	C	L. Adams	Garner
15	Mr. Charles Leggett (or Mrs. Costello) Gadsden High School Dadsden, TN 38337	Crockett	901 784-4672	6-12	6 only	C	L. Adams	Leggett
26	Ms. Pauline Elliott Alamo Elementary School Conley Road Alamo, TN 38001	Crockett	901 696-5583	K-6	K,3,5	T	L. Adams	Elliott
29	Mr. Bill Emerson Bells Elementary School Box A Bells, TN 38006	Crockett	901 663-2481	K-6	1,2,4,5	T	L. Adams	Ms. Bridge
12	Mr. James Orr Rutherford Elem. School Rutherford, TN 38369	Gibson	901 665-6180	K-6	K,3,5	C	L. Adams	

Comparison and Treatment Schools: Developmental District # 8

Personnel in district who helped in the selection/recruitment of schools: ____________

Code	Contact person/school/address	County	Phone No.	Grades: a. in school	Grades: b. tested	Status: C/T	Field Assistant assigned to test	People hel in school, known
39	Mr. Leonard Pearson Pope Elementary School Rt. 1 Jackson, TN 38301	Madison	901 668-0350	K-6	1,2,4,6	C	L. Adams	Pearson
32	Mr. Bryan Black West Hardin Elem. School Rt. 1, Box 240E Adamsville, TN 38310	McNairy	901 632-0413	K-6	K,3,5	C	L. Adams	Black
03	Mr. Larry Love Hardin County Central High Pickwick Road Savannah, TN 38372	Hardin	901 925-3976	10-12	10-12	C	L. Adams	Love
07	Mr. J. Stephen Smith Hardin City Jr. High School Rt. 4, Lacefield Drive Savannah, TN 38372	Hardin	901 925-9037	7-9	9 only	C	L. Adams	Smith
18	Mr. Ernest Golden Denmark Elementary School Rt. 1 Denmark, TN 38391	Madison	901 427-5986	K-6	1,2,4,6	T	L. Adams	Golden
40	Dr. Billie Belew Paul Caywood School 102 Monroe St. Lexington, TN 38351	Hender-son	901 968-8457	K-8	K,3,5,7,8	T	L. Adams	Belew

Comparison and Treatment Schools: Developmental District # 9

Personnel in district who helped in the selection/recruitment of schools: Helen Burke, 901-454-5516

Code	Contact person/school/address	County	Phone No.	Grades:		Status: C/T	Field Assistant assigned to test	People hel in school, known
				a. in school	b. tested			
16	Mr. James O. Catchings A.B. Hill Elementary School 1372 Latham Rd. Memphis, TN 38106	Shelby	901 942-4922	K-6	1,2,4,6	C	J. Kirkendol	Burke; Catchings; Asst. Princ
19	Mr. George Watkins Westhaven Elem. School 4505 Hodge Rd. Memphis, TN 38109	Shelby	901 789-1550	K-6	K,3,5	C	J. Kirkendol	Burke; Watkins
21	Mr. James Fleming Brownsville Road Elem. School 5292 Banbury Road Memphis, TN 38134	Shelby	901 386-6921	K-6	1,2,4,6	T	J. Kirkendol	Burke
23	Ms. Nancy Holmes Raineshaven Elem. School 4301 Van Rd. Memphis, TN 38109	Shelby	901 398-2020	K-6	K,3,5	T	J. Kirkendol	Burke; secretary
42	Mr. Harold Wilson Georgian Hills Jr. High 3925 Denver Memphis, TN 38127	Shelby	901 357-9978	7-9	7,8,9	C	J. Kirkendol	Burke; Wilson; Fo Svc. Mgr.
43	Mr. John Hamilton Trezevant High School 3350 Trezevant Memphis, TN 38127	Shelby	901 357-9013	10-12	10,11,12	C	J. Kirkendol	Burke; Hamilton

APPENDIX E

LETTER OF TRANSMITTAL
and
1980 NETSW EVALUATION INSTRUMENTS

THE UNIVERSITY OF TENNESSEE
COLLEGE OF EDUCATION
KNOXVILLE, TENNESSEE 37916

BUREAU OF EDUCATIONAL RESEARCH AND SERVICE

May 23, 1980

Ms. Charlotte Pearson
Nutrition Ed Specialist
Tennessee State Department of
Education
11th Avenue, South
Smyrna, Tennessee 37167

Dear Charlotte:

We have combined the "Facilitator Feedback Form," "Reaction to Overall Project," and "Overall Workshop Reaction" in one form, which we have called the "1980 NETSW Evaluation Form." Please check this form carefully to ensure all of the items we included are pertinent; note especially Items 13, 14, and 15 to be sure that they relate to the revised workshop format.

The "1980 NETSW Information Sheet" is the revised "Data Sheet."

We have developed a "1980 NETSW Master Coding Sheet" which will allow us to answer more specific questions in our data analysis by being able to identify specific teams and team members throughout the school year, if

(1) you see to it that the "Master Coding Sheet" is filled out correctly for each workshop;

(2) the "Master Coding Sheet" is sent to us -- one for each workshop -- along with the Information Sheets and Evaluation Forms for that workshop;

(3) all other forms are coded with the numbers corresponding to workshop, team code and position code in the space provided;

(4) we are advised of any changes in team membership throughout the year; and

(5) participants are cooperative in completing the forms.

As we have discussed previously, the "Pre/Post Needs Analysis" has been eliminated because the data collected last summer did not reveal anything beyond common sense expectations.

We have not yet incorporated the changes we want to make in the 1980 NETSW First and Second Follow-up Questionnaires and On-Site Evaluation form. However, those changes will not be substantial. Therefore, feel free to share the forms as they are with 1980 NETSW participants.

Last summer you administered a "Nutrition Content Survey" to participants prior to, and following, the workshop. Our new form entitled "Summary of Nutrition Content Survey Scores" provides a format for you to use in reporting to us the pre-test, post-test and gain scores for each workshop.

We are enclosing two new forms:

(1) one which teachers can use to report to you pre-test, post-test and gain scores on their own measures of nutrition knowledge, and

(2) a Plate Waste Data Sheet which provides a format for reporting on plate waste as a measure of student behavior.

Please review this packet of information and call Sheldon at your earliest convenience to give us your reaction and to discuss a few additional points which have occurred to us concerning usage of the forms.

Sincerely,

Trudy W. Banta

Trudy W. Banta
NET Evaluation Director

Sheldon B Clark

Sheldon B. Clark
Graduate Research Assistant
NET Evaluation Project

TWB:SBC:ecb

Enclosures

1980 NETSW
MASTER CODING SHEET

Workshop Site:________________________________ Dates:____________Through________

Which workshop was this (out of the four given during the summer)?

___First (wkshp = 1)
___Second (wkshp = 2)
___Third (wkshp = 3)
___Fourth (wkshp = 4)

MEMBERS OF TEAMS

TEACHER	FOOD SERVICE MANAGER	TEAM CODE
		01
		02
		03
		04
		05
		06
		07
		08
		09
		10
		11
		12
		13
		14
		15
		16
		17
		18
		19
		20

(cc1) Wkshp____

(cc2-3) Team____ ____

(cc4) Position____

1980 NETSW
INFORMATION SHEET

I. NAME:____
(Last) (First) (Middle Initial)

II. POSITION (check one):

A. ___(1) Teacher ___(2) Food Service Manager ___(3) Other (please specify):
____

(cc5-6) B. How many years have you served in this position?__________years

III. SCHOOL:____
(School Name)

____________________ OR ____________________
(School District) (School System)

______________________________ ____________________
(School Street Address) (School Telephone-Area Code and Number)

____
(City) (County) (State) (Zip Code)

IV. HOME:____________________
(Home Telephone-Area Code and Number)

____
(Home Street Address)

____
(City) (County) (State) (Zip Code)

V. EDUCATIONAL BACKGROUND:

(cc7-8) A. Check (✓) the highest level completed:

___(01) Below 8th grade
___(02) 8th grade
___(03) 9th grade
___(04) 10th grade
___(05) 11th grade
___(06) High School Diploma or High School Equivalency Diploma
___(07) One year college
___(08) Two years college
___(09) Three years college
___(10) Four years college
___(11) Bachelors Degree
___(12) Masters Degree
___(13) Doctorate
___(14) Other; please specify:
____

(cc9-11) B. If you have done any graduate work, how many credit hours of graduate work have you completed, including any that were taken while pursuing a Masters Degree or Doctorate?____________________credit hours

C. Special Certification(s) and/or License(s):
(Include level of certification or description of license and the year either was obtained.)

____

____

D. Have you ever taken a formal course in nutrition education?

(cc12) (Check one) ___(1) Yes ___(2) No

(cc13-14) If Yes, what was the most recent year you took such a course? 19____.

E. Have you ever attended a workshop (1-5 days) in nutrition education?

(cc15) (Check one) ____(1) Yes ___(2) No

(cc16-17) If Yes, what was the most recent year you attended such a workshop? 19____

(cc18) F. Have you ever taught or taken part in instruction in nutrition education? ____(1) Yes ____(2) No

If Yes, please describe briefly the nature of the instruction.

____

____

____

VI. TEAM MEMBER:

A. What is the name of your team member?

____
(Last) (First) (Middle Initial)

B. What is his/her position? ________________________________

C. Are they from the same school that you are?

____(1) Yes ____(2) No

1980 NETSW
Summary of "*Nutrition Content Survey*" Scores
(For Charlotte's use in reporting to the Project Evaluation Team)

Workshop ______________________________

Date ______________________________

Instructions:

- List the number of items answered correctly in the columns labeled "Pre-test Score" and "Post-test Score."
- To compute the Gain Score, subtract the Pre-test Score from the Post-test Score. Persons who took only one test will not have a Gain Score. Persons whose Post-test Score is lower than their Pre-test Score will have a negative Gain Score.

sition	Team Code	Name	Pre-test Score	Post-test Score	Gain Score

1980 NEISW
Summary of Nutrition Knowledge Assessment
(For teacher's use in reporting to Charlotte)

Teacher Name ____________________

Workshop Attended ____________________

Grade Level(s) Taught ____________________

School Name ____________________

School Address ____________________

Instructions:

- List the number of items answered correctly in the columns labeled "Pre-test Scores" and "Post-test Scores."
- To compute the Gain Score, subtract the Pre-test Score from the Post-test Score. Students who took only one of the tests will not have a Gain Score. Students whose Post-test Score is lower than their Pre-test Score will have a negative Gain Score.
- Please attach a copy of the test instrument from which these scores are derived, and send to Charlotte Pearson.

Student Name	Sex	Pre-test Scores	Post-test Scores	Gain Scores

PLATE WASTE DATA SHEET

School ____________

Grade ____________

Teacher ____________________ Date ____________

	MAIN	BREAD	COOKED VEG #1	COOKED VEG #2	RAW VEG	FRUIT	DESSERT	OTHER	MILK
Food Name									
Amt. Served									
Child #1									
Child #2									
Child #3									
Child #4									
Child #5									
Child #6									
Child #7									
Child #8									
Child #9									
Child #10									
a. Sum									
b. Sum ÷ 10= waste/child									
c. % Waste (b X 100)									

0 = No Food Left
.25 = ¼ serving left
.50 = ½ serving left
.75 = 3/4 serving left
1.00 = All serving left

oz. = ounce
c. = cup
pt. = pint
t. = teaspoon
T. = tablespoon

(cc1) Wkshp___
(cc2-3) Team ___ ___
(cc4) Position ___

1980 NETSW
EVALUATION FORM

I. Directions: Place a check (✓) in the blank beside those statements that best describe your opinion and write in comments if appropriate.

(cc5) 1. Do you feel that anything of value happened to you during this meeting?

___(1) Yes, quite a lot
___(2) Yes, something
___(3) Not much
___(4) Nothing

(cc6) 2. If you found something of value in this meeting, does any particular happening or idea stand out in your mind?

___(1) Nothing of value happened.
___(2) It was a valuable meeting, but no particular thing stands out.
___(3) Yes, something does stand out for me, namely:

____

____

(cc7) 3. If you found something in this meeting to be of no value, was there a particular happening or idea that stands out in your mind as being worthless?

___(1) Most everything was of some value.
___(2) Some parts of the meeting have no value, but no particular thing stands out.
___(3) Yes, something stands out for me as worthless (having no value), namely:

____

____

(cc8) 4. Was there any feature about the way this group operated that you thought particularly effective?

___(1) No
___(2) Yes, namely:

____

____

(cc9) 5. Was there any feature about the way this group operated that you thought particularly ineffective?

___(1) No
___(2) Yes, namely:

____

____

II. Directions: Answer the items in accordance with your own opinions about the five day workshop. There are no right answers. Circle the number on the scale that corresponds to your opinion.

(cc10) 6. Goals of the meeting

Poor:	1	2	3	4	5	Good:
(unclear; diverse; conflicting; unacceptable)						(clear; shared by all; endorsed with enthusiasm)

(cc11) 7. Participation in the meeting

Poor:	1	2	3	4	5	Good:
(few dominate; some passive; some not listened to; several talk at once or interrupt)						(all get in; all are really listened to; open and lively discussion)

(cc12) 8. Decisions made during the meeting

Poor:	1	2	3	4	5	Good:
(no decisions were made; decisions were made to which I feel uncommitted; bad decisions were made)						(good decisions were made; everyone felt a part of the decision-making process; people feel committed to the decision)

(cc13) 9. Your feeling during the meeting

Poor:	1	2	3	4	5	Good:
(I was unable to express my feelings; my feelings were ignored; my feelings were criticized)						(I freely expressed my feelings; I felt understood; I felt support from the participants)

(cc14) 10. Organization of the meeting

Poor:	1	2	3	4	5	Good:
(it was chaotic, it was too tightly controlled; very poorly done; I felt manipulated)						(it was very well organized; it was flexible enough so we were able to influence it; all went smoothly)

(cc15) 11. Relationship among meeting participants

Poor:	1	2	3	4	5	Good:
(my relationship with them is the same as before; I feel antagonistic towards many of them; I don't trust them; there is little potential for a future relationship)						(our relationship is much improved; I trust them more than I did prior to the session; I feel I got to know them better; there is good potential for the future)

(cc16) 12. Attitude about the meeting

Poor: 1 2 3 4 5 Good:

Poor:	Good:
(boring; it was a waste of time; I don't like the way it was presented; disliked it)	(interesting; was helpful; liked it)

(cc17) 13. Presentation of Interpersonal Skills/Communication

Poor: 1 2 3 4 5 Good:

Poor:	Good:
(uninstructional; did not learn much, not informative; too many exercises; too much processing; not enough content)	(learned a lot; was informative; I'll be able to use exercises and materials)

(cc18) 14. Presentation of Interpersonal Skills/Team Building

Poor: 1 2 3 4 5 Good:

Poor:	Good:
(uninstructional; did not learn much, not informative; too many exercises; too much processing; not enough content)	(learned a lot; was informative; I'll be able to use exercises and materials)

(cc19) 15. Presentation of Instructional Skills

Poor: 1 2 3 4 5 Good:

Poor:	Good:
(uninstructional; did not learn much, not informative; too many exercises; too much processing; not enough content)	(learned a lot; was informative; I'll be able to use exerciese and materials)

(cc20) 16. Leaders' respect for peoples feelings

Poor: 1 2 3 4 5 Good:

Poor:	Good:
(not sensitive to feelings of individuals; intolerant of others; critical)	(considerate of others' feelings; non-judgmental; supportive)

(cc21) 17. Leaders' desire to help participants

Poor: 1 2 3 4 5 Good:

Poor:	Good:
(not helpful at all; participants were on their own; not open to questions)	(very helpful; involved in making sure participants were on right track; encouraged questions)

cc22) 18. Clearness of leaders' instructions

Poor: 1	2	3	4	5 Good:
(spent little time trying to dispel confusion; did not seem to know what should be done, so explanations were vague; unexpected problems seemed to arise frequently; explanations were confusing and meandering)				(explained confusing things completely and thoroughly; knew what was to be done and how to do it; anticipated problems; explanations were clear and concise)

(cc23) 19. Leaders' knowledge of nutrition education

Poor: 1	2	3	4	5 Good:
(not knowledgeable; uncertain; did not respond to questions about nutrition with authority)				(very knowledgeable; competent; addressed questions about nutrition with confidence)

cc24) 20. Leaders' familiarity with materials presented

Poor: 1	2	3	4	5 Good:
(unfamiliar with materials; suggestions for uses of materials were inadequate)				(knew materials very well; offered good suggestions for using materials)

cc25) 21. Over-all productivity of the meeting

Poor: 1	2	3	4	5 Good:
(didn't accomplish much; no useful ideas emerged; it got us nowhere)				(got a lot done; very fruitful; something will come of this session)

APPENDIX F

FOLLOW-UP QUESTIONNAIRE

_______________ (cc 1-3)

NUTRITION EDUCATION TRAINING PROGRAM

FOLLOW-UP QUESTIONNAIRE

The purpose of this questionnaire is to help the Nutrition Education Training (NET) staff in its continuing evaluation of your nutrition education experiences since the 1979 Summer Workshops (NETSW). We need information concerning:

(a) the extent to which the NETSW Back Home Action Plan (BHAP) was usable in your school setting,

(b) the number of people who have been reached through your nutrition education efforts,

(c) your nutrition education plans for the 1980-1981 school year, and

(d) how you feel about the team concept in nutrition education.

INSTRUCTIONS:

For most of the following items, please indicate your response with a check (✓) in the appropriate blank. For items 4, 5 and 7 you are requested to make estimates of numbers of people, numbers of occurrences, or percentages in the spaces provided.

1. Which workshop did you attend during the summer of 1979?

_____ Martin (1)
_____ Jackson (2)
_____ Memphis (3)
_____ Columbia (4)
_____ Nashville (5)
_____ Cookeville (6)
_____ Cleveland (7)
_____ Knoxville (8)
_____ Johnson City (9)

(cc 4)

2. What is your job classification?

_____ Teacher (1)
_____ Food Service Manager (2)
_____ Other (please specify) ______________________________ (3)

(cc 5)

3. (a) How have you used the BHAP which you wrote during the Summer Workshop?

_____ Just as you wrote it -- with no changes
(1)

_____ With slight changes (changed less than ¼ of it) (cc 6)
(2)

_____ With moderate changes (changed ¼ to ½ of it)
(3)

_____ With extensive changes (changed more than ½ of it)
(4)

_____ Not at all.
(5)

(b) Please describe any extensive changes you made.

4. On how many separate occasions during the year have parents been involved in nutrition education activities planned as part of your BHAP?

On _____________ SEPARATE OCCASIONS (cc 7-8)

5. Approximately what percentage of your students have parents who have participated in your BHAP activities?

_____% (cc 9-10)

6. (a) Have you worked cooperatively with another team who attended the 1979 Summer Workshop to implement any NET-related activities?

_____ YES
(1) (cc 11)

_____ NO
(2)

(b) If so, in your opinion, how successful was this joint effort?

_____ Very Successful
(1)

_____ Somewhat Successful
(2)

_____ Not Sure (cc 12)
(3)

_____ Somewhat Unsuccessful
(4)

_____ Very Unsuccessful
(5)

7. Please estimate the total number of persons in each of the following categories that your team has involved in nutrition education during this school year:

(How many?)

__________ Superintendents (cc 13)

__________ Principals (cc 14-15)

__________ System-Level Supervisors (cc 16-17)

__________ Teachers (cc 18-20)

__________ Food Serivce Managers (cc 21-22)

__________ Food Service Workers (cc 23-25)

__________ Parents (cc 26-29)

__________ Students (cc 30-33)

__________ Other (Please list) ______________________ (cc 34-36)

8. I feel that using a teacher-food service team is the most effective way to implement nutrition education in my school.

_____ Strongly Agree
(1)

_____ Agree
(2)

_____ Not Sure
(3)

(cc 37)

_____ Disagree
(4)

_____ Strongly Disagree
(5)

9. If you do not feel that using a teacher-food service manager team is the most effective way to implement nutrition education in your school, which other school personnel should NET train in a summer workshop in order to produce the most effective program possible in your school? (Check as many of the following categories as you feel apply)

_____ The Superintendent (cc 38)

_____ System-Level Curriculum Supervisor(s) (cc 39)
(How many? ______) (cc 40-41)

_____ System-Level Food Service Supervisor (cc 42)

_____ Principal of my school (cc 43)

_____ Teachers in my school (cc 44)
(How many? ______) (cc 45-46)

_____ Food Service Manager (cc 47)

_____ Food Service Workers (cc 48)
(How many? ______) (cc 49-50)

_____ Parents (cc 51)
(How many? ______) (cc 52-54)

_____ Students (cc 55)
(How many? ______) (cc 56-58)

_____ Other (Please list) ________________________________ (cc 59)

10. I feel that the time spent on interpersonal skills and teamwork during the 1979 Summer Workshop was of value to me in my efforts to implement nutrition education in my school.

_____ Strongly Agree
(1)

_____ Agree
(2)

_____ Not Sure (cc 60)
(3)

_____ Disagree
(4)

_____ Strongly Disagree
(5)

11. Do you plan to seek additional state funding for nutrition education activities for the 1980-1981 school year?

_____ YES
(1)

_____ NO
(2)

(cc 61)

12. How involved in nutrition education do you expect to be during the 1980-81 school year?

_____ Very Involved
(1)

_____ Moderately Involved
(2)

_____ Not Sure
(3)

_____ Moderately Uninvolved
(4)

_____ Completely Uninvolved
(5)

(cc 62)

13. Looking back at last summer's workshop, what content or activity has been most helpful to you in implementing nutrition education in your school?

14. What summer workshop content or activity has been least helpful to you in implementing nutrition education in your school?

15. What changes, if any, would you suggest in order to improve the workshop for the Summer 1980 participants?

APPENDIX G

WORKSHOPS

LOCATION OF WORKSHOPS

Workshop 1 - UT Martin

Workshop 2 - Jackson

Workshop 3 - Memphis

Workshop 4 - Columbia

Workshop 5 - Murphreesboro

Workshop 6 - Cookeville

Workshop 7 - Cleveland

Workshop 8 - Knoxville

Workshop 9 - Johnson City

(Table G.1)

Question 3: How have you used the BHAP which you wrote during the summer workshop?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5	Workshop 6	Workshop 7	Workshop 8	Workshop 9	By Career		Total
										Teachers	Managers	
Just as you wrote it -- with no changes	36%	14%	35%	15%	9%	32%		30%	17%	19%	24%	21%
With slight changes (changed less than ¼ of it)	64%	86%	42%	70%	41%	50%	88%	35%	28%	57%	52%	54%
With moderate changes (changed ¼ to ½ of it)			19%	15%	36%		12%	35%	55%	21%	19%	20%
With extensive changes (changed more than ½ of it)			4%		9%	18%				3%	4%	4%
Not at all					5%						1%	1%
Number of Respondents	14	14	26	27	22	22	17	23	18	91	89	183

Table G.2

Question 4: On how many separate occasions during the year have parents been involved in nutrition education activities as a part of your BHAP?

Career	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5	Workshop 6	Workshop 7	Workshop 8	Workshop 9	Total
Teachers: Mean	2.86	5.83	2.33	4.08	4.33	2.00	3.86	5.45	3.20	3.77
Number of Respondents	7	6	6	12	12	12	8	11	10	84
Managers: Mean	3.33	4.60	2.13	3.70	3.70	2.20	3.80	5.00	3.57	3.57
Number of Respondents	6	5	8	10	10	10	6	12	7	74

Total Mean: 3.68

Table G.3

Question 5: Approximately what percentage of your students have parents who have participated in your BHAP activities?

Career	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5	Workshop 6	Workshop 7	Workshop 8	Workshop 9	Totals
Teachers: Mean %	47%	69%	19%	53%	50%	54%	61%	50%	47%	50%
Number of Respondents	7	6	6	12	12	11	7	11	9	81
Managers: Mean %	54%	58%	33%	62%	53%	44%	63%	52%	36%	51%
Number of Respondents	6	4	7	11	9	9	6	12	7	71

Total Mean %: 50.6

Table G.4

Question 6a: Have you worked cooperatively with another team who attended the 1979 Summer Workshop to implement any NET-related activities?

Response	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5	Workshop 6	Workshop 7	Workshop 8	Workshop 9	By Career		Total*
										Teacher	Manager	
Yes	71%	14%	28%	8%	14%	62%	18%	35%	22%	27%	30%	29%
No	29%	86%	72%	92%	86%	38%	82%	65%	78%	73%	70%	71%
# of Responses	14	14	25	26	22	21	17	23	18	91	87	183

* Including those other than teacher or manager: 1 principal, 1 librarian, 1 teacher substituting for workshop participant.

Table G.5

Question 6b: If so [worked cooperatively with other team], how successful was this joint effort?

Response	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5	Workshop 6	Workshop 7	Workshop 8	Workshop 9	Total
Very Successful	80%	100%	100%	100%	33%	86%	67%	100%	50%	83%
Somewhat Successful	20%				67%		33%		50%	13%
Not Sure						14%				4%
Somewhat Unsuccessful										
Very Unsuccessful										
Number of Respondents	10	2	8	2	3	14	3	8	4	54

Table G.6

Question 7: Please estimate the total number of persons in each of the following categories that has been involved in nutrition during this school year.

	Martin	Jackson	Memphis	Columbus	Nashville	Cookeville	Cleveland	Knoxville	Johnson City	TOTAL
Superintendents	3	3	1	3	6	6	2	4	7	35
Principals	5	9	23	12	28	26	8	14	22	147
System-Level Supervisors	5	16	7	23	21	16	10	23	19	140
Teachers	83	131	176	301	189	429	159	229	125	1822
Food Service Managers	7	9	10	22	47	39	66	21	39	260
Food Service Workers	44	89	48	101	43	34	28	55	88	530
Parents	241	211	50	2232	316	695	520	1015	446	5726
Students	1380	1855	2303	3782	2070	2572	1496	3377	2099	20,934
Others		2	1	13	18	22	37		16	109
TOTAL	1768	2325	2619	6489	2738	3839	2326	4738	2861	29,703

Table G.7

Question 8: I feel that using a teacher-food service manager team is the most effective way to implement nutrition education in my school.

Response	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5	Workshop 6	Workshop 7	Workshop 8	Workshop 9	By Career		Total*
										Teacher	Manager	
Strongly Agree	50%	64%	80%	48%	64%	71%	77%	91%	50%	68%	65%	67%
Agree	36%	36%	8%	52%	36%	29%	18%	9%	44%	29%	31%	29%
Not Sure	14%		12%						6%	3%	3%	3%
Disagree							6%				1%	1%
Strongly Disagree												
Number of Responses	14	14	25	27	22	21	17	23	18	91	87	181

* Including those other than teachers or managers: 1 principal, 1 librarian, and 1 teacher substituting for workshop participant.

Table G.8

Question 10: I feel that the time spent on interpersonal skills and teamwork during the 1979 Summer Workshop was of value to me in my efforts to implement nutrition education in my school.

Response	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5	Workshop 6	Workshop 7	Workshop 8	Workshop 9	By Career		Total*
										Teacher	Manager	
Strongly Agree	7%	36%	46%	19%	50%	27%	47%	48%	22%	32%	36%	34%
Agree	21%	43%	33%	48%	27%	73%	35%	39%	50%	41%	45%	42%
Not Sure		7%	4%	22%	14%		6%	9%	28%	11%	9%	11%
Disagree	72%	14%	17%	11%				4%		14%	8%	11%
Strongly Diagree					9%		12%			2%	2%	2%
Number of Responses	14	14	24	27	22	22	17	23	18	91	87	183

* Including those other than teachers or managers: 1 principal, 1 librarian, and 1 teacher substituting for workshop participant.

Table G.9

Question 11: Do you plan to seek additional state funding for nutrition education activities for the 1980-81 school year?

Response	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5	Workshop 6	Workshop 7	Workshop 8	Workshop 9	By Career		Total*
										Teacher	Manager	
Yes	17%	29%	88%	33%	62%	55%	44%	61%	44%	52%	49%	51%
No	83%	71%	12%	67%	38%	45%	56%	39%	56%	48%	51%	49%
Number of Responses	12	14	24	27	21	20	16	23	18	89	83	175

* Including those other than teachers or managers.

Table G.10

Question 12: How involved in nutrition education do you expect to be during the 1980-81 school year?

Response	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5	Workshop 6	Workshop 7	Workshop 8	Workshop 9	By Career		Total
										Teacher	Manager	
Very Involved	15%	21%	83%	52%	77%	59%	35%	70%	50%	53%	59%	56%
Moderately Involved	62%	57%	17%	44%	23%	23%	47%	30%	39%	36%	36%	36%
Not Sure	23%	21%		4%		18%	6%		11%	9%	5%	8%
Moderately Uninvolved												
Completely Uninvolved							12%			2%		1%
Number of Responses	13	14	24	27	22	22	17	23	18	91	86	180

(Table G.11)

Question 13: Looking back over last summer's workshop, what content or activity has been most helpful to you in implementing nutrition education in your School?

(Totals include multiple responses by some participants)

	Workshop 1		Workshop 2		Workshop 3		Workshop 4		Workshop 5		Workshop 6		Workshop 7		Workshop 8		Workshop 9		Career Totals		Grand Totals*
# Respondents by career	T (7)	M (7)	T (7)	M (6)	T (11)	M (15)	T (13)	M (14)	T (12)	M (11)	T (10)	M (10)	T (9)	M (8)	T (11)	M (11)	T (10)	M (8)	T (89)	M (90)	183*
Writing/using the BHAP	14%		86%	50%	55%	27%	25%	7%	33%	18%	10%		33%	50%	36%	27%			30%	19%	24%
Access to nutrition-related materials, including Goody Box	57%	57%			9%	20%	33%	7%	17%	9%	30%	10%	67%	13%	27%	9%	40%	38%	26%	17%	22%
Nutrition content and teaching activities presented at workshop				17%	9%	40%	42%	36%	33%	36%	10%	10%			9%		10%		15%	19%	16%
Meeting other food service managers and teachers, sharing ideas		14%					25%	21%		9%	20%	10%	11%		27%	36%	30%	38%	13%	14%	13%
Teamwork: working as a team with teacher/manager/parent				50%		7%	8%	14%	8%	9%	20%	10%			9%	27%	30%	25%	9%	13%	11%
Other									8%		29%	20%	33%	13%	55%		10%		12%	3%	8%
No Response	29%	29%	14%			27%		29%	8%	18%		40%	33%	38%	18%	9%	10%	13%	11%	23%	18%

*includes
1 principal; 1 librarian; 1 substitute

(Table G.12)

Question 14: What Summer workshop content or activity has been least helpful to you in implementing nutrition education in your school? (Totals include multiple responses by some participants)

Response	Workshop 1		Workshop 2		Workshop 3		Workshop 4		Workshop 5		Workshop 6		Workshop 7		Workshop 8		Workshop 9		Career Totals		Grand Totals
# Respondents by career	T (7)	M (7)	T (7)	M (6)	T (11)	M (15)	T (18)	M (14)	T (12)	M (11)	T (10)	M (10)	T (9)	M (8)	T (11)	M (11)	T (10)	M (8)	T (89)	M (90)	183*
Interpersonal skills training activities	100%	86%	43%	17%	45%	7%	67%	36%	42%	36%	40%	20%	44%	13%			60%	25%	47%	24%	35%
Too little time spent on nutrition content			29%	17%				7%											2%	2%	2%
Writing of the BHAP focused too much on the teachers; the whole exercise was poor.						7%											10%	25%	1%	3%	2%
Having to make an individualized lesson plan, and spending a whole day on it before beginning the BHAP					18%	7%													2%	1%	2%
Testing; daily review and evaluation					9%														1%		2%
Having to work as a team								7%						13%						2%	1%
Other comments including obscure and incomplete references			14%	17%			8%								18%	18%			14%	3%	4%
No response		14%	14%	33%	18%	87%	8%	57%	58%	64%	60%	80%	44%	75%	82%	82%	30%	50%	37%	64%	51%

*includes
1 principal; 1 librarian; 1 substitute

Question 15: What changes, if any, would you suggest in order to improve the workshop for the summer 1980 participants?

(Totals include multiple responses by same participants)

Response	Workshop 1		Workshop 2		Workshop 3		Workshop 4		Workshop 5		Workshop 6		Workshop 7		Workshop 8		Workshop 9		Career Totals		Grand Total
# Respondents by career	T (7)	M (7)	T (7)	M (6)	T (11)	M (15)	T (13)	M (14)	T (12)	M (11)	T (10)	M (10)	T (9)	M (8)	T (11)	M (11)	T (10)	M (8)	T (89)	M (90)	183*
Spend more time on nutrition content			29%	33%	9%		33%	21%	58%	45%	10%				9%	9%		13%	18%	16%	30%
Spend more time writing BHAP and developing implementation strategies and activities	29%		43%		55%	27%	8%	7%			30%				18%				19%	6%	12%
Materials: Allow more time to examine; provide current price list; send materials on time; provide procurement funds at the workshop; provide less repetitive materials	14%	14%	29%	33%	10%	7%		7%			10%		11%	13%		9%			7%	8%	7%
Shorten Workshop/ worshop day	14%	14%					8%	7%							18%	18%			4%	4%	4%
Include managers in writing BHAP; de-emphasize BHAP; reduce paper work					9%	7%			8%	9%							10%	13%	3%	3%	3%
Clearly State workshop goals and expectations of teams during school year, first day of workshop	14%	14%					8%		8%		10%								30%	2%	3%
Lengthen workshop			14%										11%	13%		9%			2%	2%	2%
Shorten/ eliminate interpersonal skill training activities	14%						17%	7%											3%	1%	2%
Allow more time to share ideas and plans among teams			14%				8%		8%										3%		2%
No response and "Keep on with the same responses"	3%	71%	14%	37%	9%	73%	42%	57%	25%	45%	80%	100%	44%	75%	67%	67%	80%	75%	46%	62%	55%

*includes
1 principal
1 librarian
1 substitute

APPENDIX H

NUTRITION EDUCATION TRAINING PROGRAM
REPORT ON SHARING SESSION

NUTRITION EDUCATION TRAINING PROGRAM
Report on Sharing Session

Name____________________

Position____________________

School____________________

Team Member
(Name________________
(Position________________
(School________________

The purpose of this report is to provide information to Nutrition Education Training Program (NETP) personnel about

(a) what you chose to do in your first Sharing Session
(b) the problems and satisfactions you experienced in carrying out the session,
(c) who attended,
(d) how effectively your nutrition team is functioning, and
(e) your retrospective opinion of the workshop you attended in the summer.

Your thoughtful cooperation in providing this information will be appreciated.

A. GENERAL INFORMATION ABOUT SHARING SESSION

1. Date and time of session(s):____________________

2. How long did the session(s) last? ____________________

3. Briefly describe the type of room used (e.g., classroom, lunchroom).

____

B. ACTUAL ATTENDANCE

4. Please indicate the total number of persons who attended your Sharing Session(s), according to classification.

Classification	Number in Attendance
Superintendents	________
Principals	________
Curriculum Supervisors	________
Teachers	________
Food Service Supervisors	________
Food Service Managers	________
Parents	________
Students	________
Others (please list by classification)	
________________	________
________________	________
________________	________

5. What subject areas were represented by the curriculum supervisors who attended? (please list)

____

____

6. What grade levels or subject areas were represented by the teachers who attended? (please list)

____

____

7. How many different schools were represented at this Sharing Session?

____

8. Each person who attended this session could potentially affect the nutrition-related activities of students. Please estimate the TOTAL number of students who can POTENTIALLY be affected by ALL of the persons who attended this Sharing Session.

____

C. PROMOTION OF SHARING SESSION

9. How did you distribute information about the Sharing Session?

____

____

10. How did you encourage attendance?

____

____

11. What groups of people were invited to attend your Sharing Session?

____

12. Which groups were invited, but did not attend?

____

D. FORMAT OF SHARING SESSION

13. Briefly describe what you did at the Sharing Session.

____

____

____

14. If you used or distributed any materials (e.g., audio-visuals, hand-outs, kits) during your presentation, please list.

____

____

Which, if any of these materials were supplied by the NET staff? Please indicate by circling NET-supplied materials.

E. SUPPORT OF TEAM MEMBER

15. What percentage of the preparation and implementation effort associated with conducting this session was made by the teacher?

__________%

16. What percentage was made by the food service manager?

__________%

17. Were you satisfied with this distribution of responsibility?

____

F. WORKSHOP USEFULNESS AND CARRY-OVER

18. Listed below are a number of workshop activities which were designed to assist team members in developing and implementing a "Back Home Action Plan." Indicate your assessment of the usefulness of each of these activities by entering the code number that corresponds to your opinion in Column I. In Column II place an "X" by those activities which you used in your Sharing Session.

Codes for Column I:

1 - Do not remember this activity
2 - Of no use; should be deleted from the workshop
3 - Of little use to me, but may be useful to others
4 - Of moderate use to me
5 - Of maximum use to me

	A	B
COMPONENT	Column I Usefulness (See Codes Above)	Column II "X" if also used in Sharing Session
Interpersonal skills - "Teamwork"		
Instructional skills (writing objectives, developing instructional plans, etc.)		
Back Home Action Plan Problem statement		
Force field analysis		
Survey of "Other Considerations"		
Action steps Outcomes analysis		
Responsibility & time analysis		
Physical & fiscal resources analysis		
Nutrition content		
Other activities (please list)		

19. Please list any specific workshop activities that would have been more effective in preparing you for this Sharing Session.

G. EVALUATION OF SHARING SESSION

20. In terms of your expectations, how successful do you feel this session was? (Circle one)

Very Unsuccessful	Somewhat Unsuccessful	No Opinion	Somewhat Successful	Very Successful

21. Briefly, how can you account for the relative success (or lack of success) of this Sharing Session?

____

____

____

22. If you were to conduct the session again, what changes, if any, would you make?

____

____

____

23. What Sharing Session activity do you feel was the most successful?

____

____

24. What Sharing Session activity do you feel was the least successful?

____

____

H. ADDITIONAL COMMENTS

____

____

____

Please return this completed report to:

Dr. Trudy Banta
Bureau of Educational Research and Service
212 Claxton Education Building
The University of Tennessee
Knoxville, Tennessee 37916

APPENDIX I

GOALS AND OBJECTIVES FRAMEWORK FOR NUTRITION EDUCATION IN TENNESSEE

(GRADES K-12)

GOALS, OBJECTIVES, AND TOPICS

	Exploration to increase acceptance and enjoyment of food		Differentiation of basic concepts relative to food and nutrition		Sociocultural aspects of food and nutrition			Nutrition knowledge and skills related to individual	Consumer skills related to food and nutrition
	K	1	2	3	4	5	6	7-9	10-12
The high school graduate will be able to: GOAL I: Understand the relationship of nutrition to health. Objective 1: Demonstrate an understanding of the role of nutrition in human development. (A) Demonstrate understanding of the relationships among diet, energy balance, body composition, and self image.	Basic requirements for life and growth Role of nutrition in relation to health	Relationship between activity level and energy requirements		Ways in which food contributes to meeting growth needs	Primary functions of protein, carbohydrate, and fat	Primary functions of vitamins, minerals, and water	Relationship between food intake/nutritional adequacy and physical appearance and activity	Nutritional implications of gender differences Relationship of nutrition to body systems Nutrient and caloric needs for individuals participating in different activities Contribution of physical appearance to the development of self-image	Use and validity of dietary supplements, diet aids, and weight control diets
(B) Demonstrate understanding of how energy and nutrient needs differ at different stages of the life span.	Similarities and differences in amounts and kinds of food needed by people of different ages		Relationship between growth and food intake				Differences in nutrients needed by people of different ages	Personal nutrients and caloric needs Role of nutrition in the reproductive process	Nutrient and energy needs during infancy, childhood, adolescence, and adulthood
Objective 2: Demonstrate understanding of dietary adequacy.		Different foods needed for growth	Different kinds of foods needed each day	Different nutrients contained in different foods		Logical groupings for food		Adequacy of personal diet relative to food-based guides Nutritious home-prepared and restaurant meals	Strengths and weaknesses of food-based and nutrient based guides relative to various situations Adequacy of personal diet relative to nutrient-based guides Basic diets relative to needs of various family members Adequacy of current fad diets
Objective 3: Demonstrate understanding of the relationship of dietary practices to health.		Relationship between how people feel and the food they eat	Different foods and food combinations eaten by people to keep them healthy	Relationship of health problems to dietary practice	Foods and foodways used by people in different cultures to keep them healthy Relationship between diseases and dietary practices of people in various cultures			Food patterns used by different individuals to meet their health needs Health implications of personal dietary practices	Nutrient adequacy of menus for various sociocultural groups Health implications of various dietary practices Menus for various economic levels
GOAL II: Understand the relationship between individual and environmental characteristics and food-related behavior. Objective 1: Demonstrate understanding of the roles of sensation and perception of food characteristics on food-related behavior.	Differences in taste sensations Sensory experiences with food			Different sensations and perceptions produced by different foods and combinations of foods	Characteristics of foods in different cultures		Relationship between food characteristics and patterns of food acceptance	Sensations and perceptions of foods achived using different preparation techniques Meals with varied food characteristics	Sensations and perceptions of foods achieved using different preservation techniques.
Objective 2: Demonstrate understanding of the relationship between the environment and food-related behavior.									Influences on food-related behavior of various types of settings in which food is purchased and/or served.
(A) Demonstrate understanding of the relationship between the physical and sociocultural environments and food acceptance.		Influence of physical setting on reactions to food	Relationship between the presence and behavior of others and reactions to food		Differences in acceptable eating behavior in different cultures			Culturally acceptable criteria for settings conducive to pleasurable eating	Relationship between food cost and the setting in which it is purchased and/or served
(B) Demonstrate understanding of the relationship between the physical and sociocultural environments and food availability.		Different foods available to people in different places Places foods are produced	Different foods available at different times of the year	Steps involved in the process of food production, distribution, and consumption	Geographic and economic factors that influence food availability in different regions Limitations in food supply in some geographic areas	Resources in different geographic areas that are used in food production, distribution, and consumption		Characteristics of the immediate physical and sociocultural environment that influence the availability of various foods	Relationship between food availability and cost. Relationship between agricultural practices and food production and safety. Personal values related to problems of world food supply.
Objective 3: Demonstrate understanding of the relationship between characteristics of the individual and food-related behavior.	Food patterns as a reflection of family background		Relationship between experiences with food and feelings about it			Influences of sociocultural heritage on family eating patterns		Relationship between personal dietary practices and knowledge, attitudes, and experiences	Influence of personal values on consumer decisions related to food purchase
Objective 4: Demonstrate understanding of the relationship between resources and food-related behavior.		Differences in food costs Differences in food preparation times	Relationship between what people hear about food and their beliefs about it	Validity of sources of information about food and nutrition		Relationship of foodways to patterns of resource availability		Relationship between factors influencing food selection and cost	Information which is available to consumers about food Impact of food advertising on consumers Relationship between food-related behavior and resource availability Nutritious meals requiring various amounts of preparation time
GOAL III: Understand the physical and chemical properties of food. Objective 1: Demonstrate understanding of the sources of food.		Major food sources	Edible portions of various plants Kinds of animals from which different kinds of foods are obtained			Relationships between origins of foods and foodways of different sociocultural groups		Origins of fabricated foods	Advantages and disadvantages of obtaining various foods from different distribution systems
Objective 2: Demonstrate understanding of the nutrient and energy composition of food.	Nutritious snacks	Nutritional values of common snacks		Foods which are good sources of nutrients and energy	Foods typical of various cultures which are good sources of nutrients and energy		Common foods which are high and low in sugar, starch, fat, and protein	Caloric content of different foods Foods high in iron; calcium; and vitamins A, C, and D Nutrient loss resulting	Nutrient densities of common foods Foods high in folacin and vitamins B_{12} and E Nutrient loss resulting from different methods

								from different methods of food preparation	of food preservation
Objective 3: Demonstrate understanding of how the physical and chemical properties of food affect its preparation and storage.	Simple uncooked snacks Foods which need refrigeration Role of cleanliness in preparing and eating food		Simple uncooked meals	Foods which do and do not need to be cooked before they can be eaten safely	Types of food preparation used in different cultures Types of food preservation used in different cultures			Meals involving different food preparation techniques Principles of food safety involved in food storage and preparation Time requirements for preparing different foods	Function of additives with respect to physical and chemical properties of food Short- and long-term implications of food additives with respect to health of individuals
GOAL IV: Understand the process for resolving food- and nutrition-related concerns. Objective 1: Demonstrate understanding of food- and nutrition-related problems and issues relevant to self, community, and the world.		Differences in ideas people have about food		Changes in people's beliefs about food over time	Food- and nutrition-related problems of people in different geographic areas and sociocultural groups	Differences in ideas people have about role of food and nutrition in relation to consumer and health topics		Personal problems related to food and nutrition	Current food- and nutrition-related issues Implications for self, community, and world of various food- and nutrition-related issues Role of food and nutrition in relation to political, social, economic, and health issues
Objective 2: Demonstrate understanding of use of resources for solving food- and nutrition-related problems and analyzing issues.	General sources of information on food and nutrition	Different kinds of resources used in solving food and nutrition problems	Media sources of information on food and nutrition	Role of resources in solving food- and nutrition-related problems		Differences in goals related to food and nutrition that are supported by different interest groups Differences in resources available to different individuals and groups for solving food and nutrition problems		Professions which are good sources of information on food and nutrition Quantity and quality of information about food and nutrition Means of checking validity of information about food and nutrition Resources available for solving personal food- and nutrition-related problems	Organizations and agencies which are sources of information on food and nutrition Quantity and quality of information available from different sources on various food- and nutrition-related topics Goals and vested interests of different sources of information about food and nutrition Role of resources in food production, distribution, and consumption Means of substituting one resource for another in solving food- and nutrition-related problems
Objective 3: Demonstrate understanding of the problem-solving process in relation to food- and nutrition-related concerns.									
(A) Demonstrate understanding of alternatives for solving food- and nutrition-related problems and consequences of each for self, community, and the world.		Alternative solutions to food- and nutrition-related problems		Different consequences related to different solutions to food- and nutrition-related problems			Steps in solving food and nutrition-related problems	Similarity of conclusions which can be reached from information about food and nutrition from different sources	Potential costs and benefits of alternative solutions to food- and nutrition-related problems Conflicts and agreements in information about food and nutrition from different sources Personal values associated with various alternatives for solving food- and nutrition related problems
(B) Demonstrate understanding of the process for implementing solutions for food- and nutrition-related consumer and health problems.	Cooperative efforts in solution of food- and nutrition-related problems			Mutual exclusivity of some alternatives for solving food- and nutrition-related problems			Relationship between goals of people in different groups and their choices of alternatives for solving food- and nutrition-related problems Compatibility of roles that can be assumed by people with different resources for the solution of food- and nutrition-related problems	Personal roles in resolving food- and nutrition-related concerns	Community and national roles in implementation of solutions to food- and nutrition-related problems
(C) Demonstrate understanding of the process for evaluatory solutions and problem-solving processes applied to food- and nutrition-related consumer and health matters.		Reoccurrence of food- and nutrition-related problems		Improvement of skills in solving food- and nutrition-related problems			Similarities in process for solving different kinds of food- and nutrition-related problems	Personal strengths and weaknesses in applying the problem-solving process to the solution of food- and nutrition-related problems	Effectiveness of resource use in solution of food- and nutrition-related problems Problem-solving process as a means of improving effectiveness in solving food- and nutrition-related problems

APPENDIX J

NUMBER OF PARTICIPANTS BY CATEGORY IN BASELINE DATA SAMPLE

NUMBER OF PARTICIPANTS BY CATEGORY IN BASELINE DATA SAMPLE

Category	Number of Participants
Student Groups	
Grades K-1	743
Grades 2-3	787
Grades 4-6	1436
Grades 7-9	670
Grades 10-12	503
Adult Groups	
Parents	1659
Elementary school teachers	197
Secondary school teachers	65
Food service personnel	
Managers	37
Workers	110
Administrators	58

APPENDIX K

DISTRIBUTION OF ITEMS BY GRADE LEVEL OR SUBJECT MATTER OF OBJECTIVE REFERENT FOR NUTRITION KNOWLEDGE SCALE OF PILOT VERSIONS OF INSTRUMENTS

APPENDIX K

Distribution of Items by Grade Level or Subject Matter of Objective Referent for Nutrition Knowledge Scale of Pilot Versions of Instruments

Instrument/item referent	Goal I				Goal II					Goal III			Goal IV				
	Obj. 1		Obj. 2	Obj. 3	Obj. 1	Obj. 2		Obj. 3	Obj. 4	Obj. 1	Obj. 2	Obj. 3	Obj. 1	Obj. 2	Obj. 3		
	1A	1B				2A	2B								3A	3B	3C
Student Groups[a]																	
Grades K-1																	
Kindergarten	2	3			3			2				5		2		1	
Grade 1	1		2	2		1	2		2	4	3		1	2	1		1
Grades 2-3																	
Grade 2		2	1	2		1	1	3	1	5		2		2			
Grade 3	2		2	1	2		2		1		3	2	1	1	1	1	1
Grades 4-6																	
Grade 4	2			3	1	2	3				1	2	2				
Grade 5	1		2				2	1	2	1			1	4			
Grade 6	2	1			1						1				2	2	1
Grades 7-9																	
Biological Science	3	2															
Health	1			2				2					1				
Home Economics	2	1	4		1	1			1	1	6	6		6	1	2	1
Social Studies							2										
Grades 10-12																	
Civics							1						1	2		1	
Economics							1	1		1				1	1		
General Science							1										
Health	2			2										2			
Home Economics		2	5	2	1	2			4		4	2	2	1	2		2

	Goal I				Goal II					Goal III			Goal IV				
	Obj. 1		Obj. 2	Obj. 3	Obj. 1	Obj. 2		Obj. 3	Obj. 4	Obj. 1	Obj. 2	Obj. 3	Obj. 1	Obj. 1	Obj. 3		
	1A	1B				2A	2B								3A	3B	3C
Adult Groups[b]																	
Parents																	
Grades K-1		1	1														
Grades 2-3											1	1					
Grades 4-6							1									1	1
Grades 7-9		1	1	1				1	1	1	2	1					
Grades 1-12	1	1			1	1			2				1	1	1		
Elementary School Teachers																	
Grades K-1		1	1														
Grades 2-3											1	1					
Grades 4-6	1						1							1		1	1
Grades 7-9		1	2	1				1	1	1	2						
Grades 10-12	1	1	2		1	1			2			1	1	1	1		
Secondary School Teachers																	
Grades K-1		1	1														
Grades 2-3											1	1					
Grades 4-6							1									1	1
Grades 7-9	1	2	1	1				1	1	1	2						
Grades 10-12	1	1	1		1	1			2		1	1	1	1	1		
Food Service Managers																	
Grades K-1		1	1														
Grades 2-3											1	1					
Grades 4-6							1									1	1
Grades 7-9		2	3	1				1	1	1	3			1			
Grades 10-12	1	1			1	1			2			1	1	1	1		

Note. Columns refer to organization of content in relation to terminal objectives.

[a] Rows refer to objectives identified for each developmental level and further targeted for a specific grade level (elementary levels) or subject matter (secondary levels). In most cases, a blank in a row for a given column indicates the absence of any grade-level- or subject-matter specific objectives for that terminal objective.

[b] Rows refer to the development level of student objectives on which content was based. In the case of core items (common to all adult instruments), the items also appeared on the student instrument for that developmental level. In the case of items not included in the core, the item represented content in relation to student objectives at that developmental level, but the item was not included on the student instrument at that developmental level.

APPENDIX L

DISTRIBUTION OF ITEMS BY DEVELOPMENTAL LEVEL OF CONTENT FOR NUTRITION KNOWLEDGE ITEMS IN ADULT CORE ON PILOT VERSIONS OF INSTRUMENTS

Distribution of Items by Developmental Level of Content for Nutrition Knowledge Items in Adult Core on Pilot Versions of Instruments

Terminal Objective Referent	Grades K-1	Grades 2-3	Grades 4-6	Grades 7-9	Grades 10-12
Goal I					
Objective 1					
1A				1	1
1B	1			1	
Objective 2	1			1	2
Objective 3			1	1	
Goal II					
Objective 1					1
Objective 2					
2A					1
2B			1		1
Objective 3				1	
Objective 4				1	2
Goal III					
Objective 1				1	
Objective 2		1		1	1
Objective 3		1		2	
Goal IV					
Objective 1					1
Objective 2					1
Objective 3					
3A					1
3B			1		
3C			1		

Note. Rows refer to the general (terminal) objective to which the item is related. Columns refer to the developmental level of the specific objective (for a designated grade level or subject matter area) on which the item is based.

APPENDIX M

SCHOOLS PARTICIPATING IN PILOT TEST FOR NET EVALUATION

SCHOOLS PARTICIPATING IN PILOT TEST FOR NET EVALUATION

School	Grades in School
Cedar Bluff Primary	K, 1, 2
Cedar Bluff Middle	6, 7, 8
Eatons Elementary	K, 1, 2
Farragut High	9, 10, 11, 12
Hermitage High	9, 10, 11, 12
Powell Elementary	K, 1, 2, 3, 4, 5

APPENDIX N

NUMBER OF PARTICIPANTS BY CATEGORY IN PILOT TEST SAMPLE

APPENDIX N

Number of Participants by Category in Pilot Test Sample

Category	Number of Participants[a]
Student Groups	
Grades K-1	95
Grades 2-3	84
Grades 4-6	216
Grades 7-9	214
Grades 10-12	269
Adult Groups	
Parents	131
Elementary school teachers	8
Secondary school teachers	15
Food Service Personnel	
Managers	7
Workers	22
Administrators	12

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[a] Some additional data returned after the deadline for data analysis were not included in these totals.

APPENDIX O

RELIABILITY INDICES FOR PILOT TEST VERSIONS OF INSTRUMENTS FOR ASSESSING NUTRITION KNOWLEDGE, ATTITUDES, AND PRACTICES

Reliability Indices for Pilot Test Versions of Instruments for Assessing Nutrition Knowledge, Attitudes, and Practices

Instrument/Scale	Number of Respondents	Number of Items in Scale	Cronbach's Alpha (Standardized)
	Student Groups		
Grades K-1			
Knowledge	95	40	.88
Attitudes	95	10	.88
Practices	95	10	.84
Grades 2-3			
Knowledge	84	40	.68
Attitudes	84	10	.57
Practices	84	10	.57
Grades 4-6			
Knowledge	216	40	.86
Attitudes	216	20	.73
Practices	216	20	.68
Grades 7-9			
Knowledge	214	46	.84
Attitudes	214	20	.62
Practices	214	20	.82
Grades 10-12			
Knowledge	269	45	.80
Attitudes	269	20	.73
Practices	269	20	.79

Instrument/Scale	Number of Respondents	Number of Items in Scale	Cronbach's Alpha (Standardized)
Adult Groups			
Parents			
Knowledge	131	39	.87
Attitudes	131	20	.80
Practices	131	20	.92
Elementary school teachers			
Knowledge	8	49	.64
Attitudes	8	20	.77
Practices	8	20	.78
Secondary school teachers			
Knowledge	15	49	.67
Attitudes	15	20	.90
Practices	15	20	.96
Food service personnel			
Knowledge[a]	7	38	.88
Attitudes	29	20	.78
Practices	29	27	.94
Administrators[b]			
Attitudes	12	22	.89
Practices	12	27	.94

[a] Assessed for food service managers only.

[b] Assessment included attitudes and practices only.

Item Analyses for Knowledge Scale on Pilot Test Versions of Instruments

Instrument	Number of Participants	Number of Items in Scale	Average Difficulty Index	Average Discrimination Index
Grades K-1	95	40	.44	.41
Grades 2-3	84	40	.34	.29
Grades 4-6	216	40	.45	.45
Grades 7-9	214	46	.44	.39
Grades 10-12	269	46	.53	.38
Parents	131	39	.32	.32

Note: Too few responses were obtained for reliable item analyses of the knowledge scales for elementary school teachers, secondary school teachers, or food service managers. Knowledge was not assessed for administrators or food service workers.

APPENDIX P

DISTRIBUTION OF ITEMS BY DEVELOPMENTAL LEVEL OF CONTENT FOR NUTRITION KNOWLEDGE ITEMS IN ADULT CORE ON FINAL VERSIONS OF INSTRUMENTS

Distribution of Items by Developmental Level of Content for Nutrition Knowledge Items in Adult Core on Final Versions of Instruments

	Grades K-1	Grades 2-3	Grades 4-6	Grades 7-9	Grades 10-12
Goal I					
Objective 1					
1A					1
1B	1			1	1
Objective 2	1			1	
Objective 3				1	
Goal II					
Objective 1					1
Objective 2					
2A					1
2B			1		
Objective 3				1	
Objective 4				1	2
Goal III					
Objective 1				1	
Objective 2		1		2	
Objective 3		1		1	
Goal IV					
Objective 1					1
Objective 2					1
Objective 3					
3A					1
3B			1		
3C			1		

Note. Rows refer to the general (terminal) objective to which the item is related. Columns refer to the developmental level of the specific objective (for a designated grade level or subject matter area) on which the item is based.

APPENDIX F

Distribution of Items by Grade Level or Subject Matter of Objective Referent for Nutrition Knowledge Scale of Final Versions of Instruments

Instrument/item category	Goal I				Goal II					Goal III			Goal IV				
	Obj. 1		Obj. 2	Obj. 3	Obj. 1	Obj. 2		Obj. 3	Obj. 4	Obj. 1	Obj. 2	Obj. 3	Obj. 1	Obj. 2	Obj. 3		
	1A	1B				2A	2B								3A	3B	3C
Student Groups[a]																	
Grades K-1																	
Kindergarten	1	2			1			1				3		1		1	
Grade 1	1		1	1		1			1	2	1		1				1
Grades 2-3																	
Grade 2		1	1	1		1		1		3		1					
Grade 3	1		1		1		1		1		1	1	1	1	1		1
Grades 4-6																	
Grade 4	2			2		1						1					
Grade 5			1				1	1	1	1			1	2			
Grade 6		1			1						1				1	1	1
Grades 7-9																	
Biological science	1	1															
Health	1			2				1					1				
Home Economics		1	1		1	1			1	1	3	2		3	1	1	1
Social Studies							1										
Grades 10-12																	
Civics														1		1	
Economics								1		1							
General Science							1										
Health	2			1										1			
Home Economics		2	2	1	1	1			2		2	1	1		1		2

Instrument/item referent	Goal I				Goal II					Goal III			Goal IV				
	Obj. 1		Obj. 2	Obj. 3	Obj. 1	Obj. 2		Obj. 3	Obj. 4	Obj. 1	Obj. 2	Obj. 3	Obj. 1	Obj. 2	Obj.		
	1A	1B				2A	2B								3A	3B	3
Adult Groups[b,c]																	
Parents																	
Grades K-1		1	1														
Grades 2-3											1	1					
Grades 4-6	1			1			1									1	1
Grades 7-9	2	2	1	1				1	1	1	3	2		2			
Grades 10-12	1	1	2		1	1	1		3		1	1	1	1	1		
Elementary School Teachers																	
Grades K-1		1	1														
Grades 2-3				1							1	1					
Grades 4-6	2						2			1	1		2	2		1	1
Grades 7-9		2	2	1				1	1	1	4	1		1			
Grades 10-12	2	1	2		1	1	1	1	3		2	1	1	2	1		
Secondary School Teachers																	
Grades K-1		1	1														
Grades 2-3											1	1					
Grades 4-6	1			1			1									2	1
Grades 7-9	2	2	1	1				1	1	1	3	1					
Grades 10-12	2	2	3	1	1	1	1	1	2	1	2	2	4	3	1		
Food Service Managers																	
Grades K-1		1	1									1					
Grades 2-3											1	1					
Grades 4-6	1						1						1			1	1
Grades 7-9	1	1	3	1				1	2	1	2	4		1			
Grades 10-12	1		2	1	1	1	1		2	1			1	1	1		

Note. Columns refer to organization of content in relation to terminal objectives.

[a] Rows refer to objectives identified for each developmental level and further targeted for a specific grade level (elementary levels) or subject matter (secondary levels). A blank in a row for a given column indicates the absence of any grade-level- or subject-matter specific objectives for that terminal objective.

[b] Rows refer to the developmental level of student objectives on which content was based. In all cases, items also appeared on the student instrument for that developmental level.

[c] Knowledge was not assessed for food service workers or administrators.

APPENDIX Q

FINAL VERSIONS OF INSTRUMENTS FOR ASSESSING NUTRITION KNOWLEDGE, ATTITUDES, AND PRACTICES

ASSESSMENT OF NUTRITION KNOWLEDGE, ATTITUDES, AND PRACTICES AND PERCEPTIONS OF NUTRITION EDUCATION

Jo Lynn Cunningham
Jean Skinner
Lynn C. Cagle
Sharon Teets
Sandra W. Miller
Trudy Banta

with the assistance of

Sheldon Clark
Caroline Goddard
Charlene James
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Carole Whitehead

The University of Tennessee, Knoxville

THE UNIVERSITY OF TENNESSEE
College of Education · Bureau of Educational Research and Service
KNOXVILLE, TENNESSEE 37916

NUTRITION EDUCATION PROJECTS

HOME ECONOMICS BUILDING

Dear Parent:

Thank you for becoming an important part of our evaluation of the Tennessee Nutrition Education and Training Program (NET). By completing the attached questionnaire you will be helping us make sure that the Tennessee NET program is accomplishing its goals.

The foremost NET goal is to assist Tennessee's children and youth to understand the relationship of food and nutrition to total health, and to put this knowledge into practice in the selection of a nutritious diet.

Other NET goals include:

(1) providing Tennessee's teachers with accurate and current information about nutrition and human health,

(2) improving the quality and appeal of foods served in school food service programs throughout Tennessee, and

(3) achieving school, home and community support for a cooperative program of nutrition education.

During the coming years Tennessee NET, a program operated with federal funds, will offer workshops and other educational experiences designed to assist teachers, food service personnel, administrators and parents in providing the best possible nutrition education and school food service for Tennessee's children and youth. As evaluators we hope to assess the effectiveness of that training effort by comparing the knowledge of, and attitudes toward, nutrition and food service expressed by a representative sample of students, teachers, food service personnel, administrators, and parents today with their knowledge and attitudes in future years. It's today's sample we're asking you to provide; you or others associated with your school will be asked to complete the same questionnaire next year to provide the 1981 sample. Comparison of scores obtained in 1980 and in 1981 will give us important information about the effectiveness of training workshops planned for Summer 1980.

Please feel free to answer each question honestly. Neither your name nor the name of your school will be used in the analysis of responses--we need only to obtain a sample of nutrition knowledge and attitudes that is representative of the State. Return of this questionnaire signifies your willingness to participate in the NET evaluation.

Please complete the attached questionnaire and SEND IT BACK WITH YOUR CHILD TOMORROW, if possible and certainly by the following day. If you prefer to mail your form to UT, please do so within 10 days. If two of your children happen to bring home forms, please complete one form and send the other back with a note that you have received duplicate forms.

THANK YOU VERY MUCH FOR SHARING YOUR TIME WITH US to benefit the Nutrition Education Program in Tennessee.

Sincerely,

Trudy W. Banta

Trudy W. Banta
NET Evaluation Director

TNET

SECTION I

Directions: For each item in this section (Questions 1-20), circle the number to the left of the item which is under the column heading which indicates how you really feel about that statement.

Strongly agree	Mildly agree	Undecided	Mildly disagree	Strongly disagree	
1	2	3	4	5	(1) I think I understand the purpose of Tennessee's Nutrition Education Training Program (NET).
1	2	3	4	5	(2) I am satisfied with the school food service program at my child's school.
1	2	3	4	5	(3) In general, I am satisfied with what I know about nutrition.
1	2	3	4	5	(4) If the school or community were to offer free programs, workshops, or classes in nutrition, I would like to participate.
1	2	3	4	5	(5) I am satisfied with what my child is learning about nutrition at school.
1	2	3	4	5	(6) My child does not like the way the food in the school cafeteria looks.
1	2	3	4	5	(7) My child thinks it is more fun to eat away from school than in the cafeteria at school.
1	2	3	4	5	(8) My child thinks the school lunchroom is not a very nice place to eat.
1	2	3	4	5	(9) The food in my child's school cafeteria costs too much.
1	2	3	4	5	(10) My child thinks the line in the school lunchroom is too long.

Strongly agree	Mildly agree	Undecided	Mildly disagree	Strongly disagree	
1	2	3	4	5	(11) I like to keep up with new information about foods and nutrition.
1	2	3	4	5	(12) It bothers me to think about the food problems of people in other countries.
1	2	3	4	5	(13) I like to find out about the backgrounds of people who give advice about food and nutrition.
1	2	3	4	5	(14) Information about nutrition is one of the most important things children learn at school.
1	2	3	4	5	(15) Helping my child(ren) think about how eating behavior affects other people is one of my most important responsibilities as a parent.
1	2	3	4	5	(16) I like to read the labels on foods before I decide what to buy.
1	2	3	4	5	(17) I like to be sure the table looks nice for my family's meals.
1	2	3	4	5	(18) I like to help my child(ren) learn to fix some foods.
1	2	3	4	5	(19) I prefer serving my family the same foods rather than trying to get them to eat new ones.
1	2	3	4	5	(20) I like to eat a variety of foods every day.

SECTION II

Directions: For each item in this section (Questions 20-44), circle the number to the left of the item which is under the column heading which indicates how frequently you (or your child in some cases) engage in the behavior described in the statement. (If you do not know the answer to Questions 26-30, leave the item blank.)

Never	Seldom	Sometimes	Usually	Always	
1	2	3	4	5	(21) My child participates in the school food service program for breakfast.
1	2	3	4	5	(22) My child participates in the school food service program for lunch.
1	2	3	4	5	(23) My child participates in the school food service special milk program.
1	2	3	4	5	(24) My child takes a lunch to school.
1	2	3	4	5	(25) My child leaves the school grounds for lunch.
1	2	3	4	5	(26) My child eats the plate lunch in the school cafeteria.
1	2	3	4	5	(27) My child eats lunch from the fast food line in the school cafeteria.
1	2	3	4	5	(28) My child eats lunch from the salad bar in the school cafeteria.
1	2	3	4	5	(29) My child eats lunch from the Coke and candy machines at school.
1	2	3	4	5	(30) My child skips lunch.
1	2	3	4	5	(31) If I had time, I would help in planning school menus.
1	2	3	4	5	(32) If I had time, I would help make posters and decorations for the school cafeteria.
1	2	3	4	5	(33) If I had time, I would take turns with other parents eating lunch with the children in the school cafeteria.
1	2	3	4	5	(34) If I had time, I would help with a tasting party for the children at school.

Never	Seldom	Sometimes	Usually	Always	
1	2	3	4	5	(35) I try to eat foods which will be best to keep me healthy.
1	2	3	4	5	(36) I try to set a good example for my child(ren) with the foods I eat.
1	2	3	4	5	(37) I encourage my family to try foods they have not eaten before.
1	2	3	4	5	(38) I get useful information about foods and nutrition from TV.
1	2	3	4	5	(39) I try to help my child(ren) develop good eating habits.
1	2	3	4	5	(40) I avoid serving my family foods with additives and preservatives.
1	2	3	4	5	(41) I use a daily food guide to plan my family's meals.
1	2	3	4	5	(42) I try to be sure my family eats something nutritious every morning.
1	2	3	4	5	(43) I try to serve my child(ren) a variety of foods every day.
1	2	3	4	5	(44) I use good safety practices when I store and handle food.

SECTION III

Directions: For each item in this section (Questions 45-69), circle the number of the response choice which is the best (most correct) answer to the question.

(45) What is the best way to get all the nutrients you need every day?

1 = Drink lots of milk.
2 = Eat different kinds of foods.
3 = Eat lots of meat.
4 = Take vitamin pills.

(46) Why are fast-food restaurants often cheaper places to eat than other restaurants?

1 = Their food is low in nutrients and calories.
2 = They have very few expenses.
3 = They provide few customer services.
4 = They usually are located in low-rent areas.

(47) Which of the following foods contains the most calories?

1 = 1 dinner roll
2 = 1 cup whole milk
3 = 4 ounces of steak
4 = 10 potato chips

(48) Why might two foods and nutrition textbooks have different information on adequacy of nutrient intake of children and teenagers?

1 = The author of one book had more recent information on food habits of children and teenagers.
2 = The author of one book liked children and teenagers better.
3 = The author of one book was known better.
4 = The author of one book was paid more for writing the book.

(49) Which of the following family members needs the most protein?

1 = 10-year-old daughter who takes ballet
2 = 15-year-old son who plays football
3 = 35-year-old mother who is pregnant
4 = 37-year-old father who is a farmer

(50) If fruits are preserved by freezing, which of the following characteristics usually is changed?

1 = Acidity
2 = Digestibility
3 = Nutrient content
4 = Texture

(51) Which of the following foods is the main ingredient used in the manufacture of imitation bacon?

1 = Beef
2 = Corn
3 = Milk
4 = Soybeans

(52) One family bought a big box of a new dry cereal because it had a prize in the box, but no one liked the cereal. What should they do next time they want to try a new cereal?

1 = Buy a cereal that looks like one they have tried before.
2 = Buy a cereal they can cook.
3 = Buy a small box of the new cereal.
4 = Do not buy cereal with a prize in the box.

(53) Which of these fast-food meals would provide the most nutrients?

1 = Chicken, mashed potatoes, and roll
2 = Hamburger, french fries, and Coke
3 = Hot dog and milk shake
4 = Sausage-cheese pizza and salad

(54) What is the main reason that people in Iowa do not eat as much seafood as the people in Florida?

1 = Fresh ocean fish are expensive because they have to be shipped long distances.
2 = Many people in Iowa catch their own fish in local lakes.
3 = Most people in Iowa do not like seafood.
4 = Polluted water in Iowa has caused a shortage of fish.

(55) Which of the following foods contains the most iron?

1 = Cake
2 = Hamburger
3 = Milk
4 = Pineapple

(56) What probably would happen if people in the U.S. ate more vegetable protein and less meat?

1 = Meat prices would go up.
2 = More food would be available to send to hungry people in other countries.
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4 = There would not be enough food for animals in the U.S.

(57) Which one of these people would need the most food?

1 = A baby
2 = A 6-year-old child
3 = A 10-year-old child
4 = An adult

(58) What is the most likely reason that some young people do not eat many kinds of vegetables?

1 = Their families cannot afford many kinds.
2 = They cannot get many kinds in the grocery store.
3 = They do not know how to cook many kinds.
4 = They have not learned to like many kinds.

(59) Why are nitrites used in ham and bacon?

1 = To add flavor and color and prevent bacterial growth
2 = To improve the vitamin content
3 = To increase the tenderness of the product and reduce time required for cooking
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(60) What is a major reason that children choose to eat candy, potato chips, and Cokes even though they know these foods are not the most nutritious snacks?

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2 = It probably has more protein than the cheaper piece.
3 = It probably has more vitamins and minerals than the cheaper piece.
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(63) Which of the following foods provides energy but not many nutrients?

1 = Carrot sticks
2 = Celery with cheese
3 = Hamburger
4 = Kool-Aid

(64) There has been heated debate about possible banning of Additive A in all food products. Although Additive A may be harmful to humans, several groups have protested the ban. Which of the following groups has a logical argument rather than a selfish interest?

1 = Drug companies that manufacture Additive A and claim they have found from their research that it is safe for humans
2 = Food companies that use Additive A in their products
3 = Medical authorities that argue that the alternative may be more harmful to some people than Additive A is
4 = Consumers that enjoy food products containing Additive A

(65) Three students compared what they ate for breakfast. Karen had a hard-cooked egg, tomato juice, and cereal with milk. Bill had a hamburger and a banana milkshake. Pat had toast and orange juice. Who had nutritionally balanced breakfast(s)?

1 = None of the students
2 = Only Pat
3 = Both Karen and Bill
4 = All the students

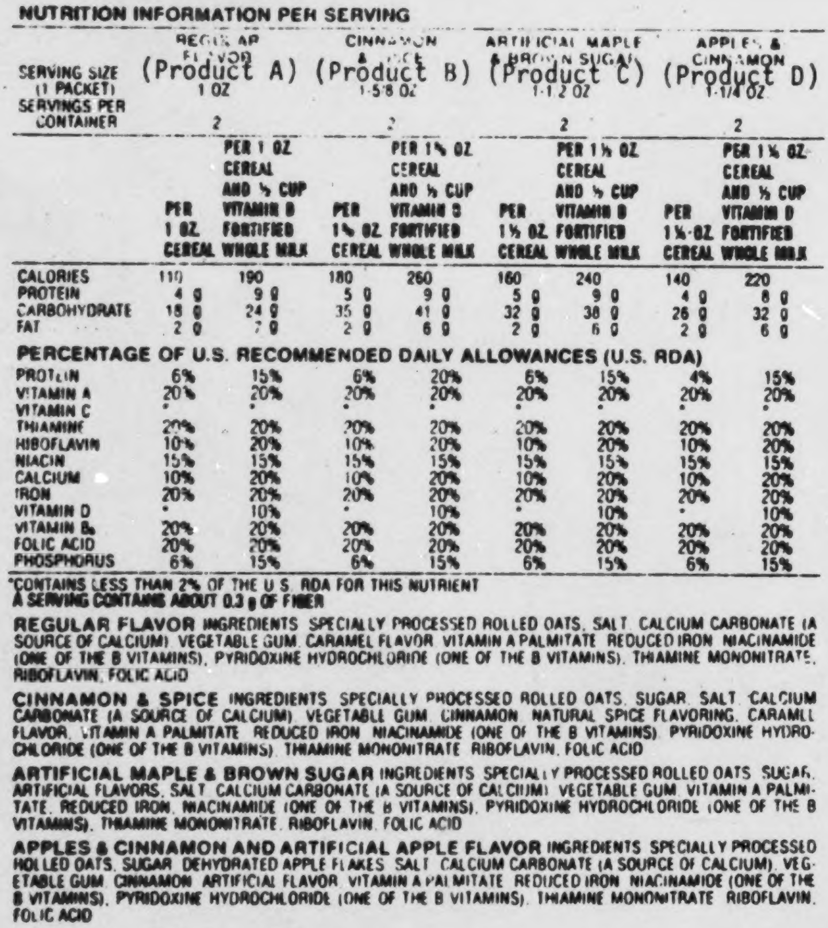
(66) Which of these foods should be cooked before it is safe to eat?

1 = Cabbage
2 = Egg
3 = Green beans
4 = Spinach

(67) What foods are needed by a 3-month-old infant?

1 = Breast milk or formula only
2 = Breast milk or formula and enriched cereal
3 = Enriched cereal, pureed vegetables, orange juice, and milk
4 = Some foods from each of the Four Food Groups

Use the following package label to answer questions 68 and 69:



NUTRITION INFORMATION PER SERVING

	REGULAR FLAVOR (Product A)		CINNAMON & SPICE (Product B)		ARTIFICIAL MAPLE & BROWN SUGAR (Product C)		APPLES & CINNAMON (Product D)	
SERVING SIZE (1 PACKET)	1 OZ		1-5/8 OZ		1-1/2 OZ		1-1/4 OZ	
SERVINGS PER CONTAINER	2		2		2		2	
	PER 1 OZ. CEREAL	PER 1 OZ CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1⅝ OZ. CEREAL	PER 1⅝ OZ CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1½ OZ. CEREAL	PER 1½ OZ CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1¼-OZ. CEREAL	PER 1¼ OZ CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK
CALORIES	110	190	180	260	160	240	140	220
PROTEIN	4 g	9 g	5 g	9 g	5 g	9 g	4 g	8 g
CARBOHYDRATE	18 g	24 g	35 g	41 g	32 g	38 g	26 g	32 g
FAT	2 g	7 g	2 g	6 g	2 g	6 g	2 g	6 g
PERCENTAGE OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA)								
PROTEIN	6%	15%	6%	20%	6%	15%	4%	15%
VITAMIN A	20%	20%	20%	20%	20%	20%	20%	20%
VITAMIN C	*	*	*	*	*	*	*	*
THIAMINE	20%	20%	20%	20%	20%	20%	20%	20%
RIBOFLAVIN	10%	20%	10%	20%	10%	20%	10%	20%
NIACIN	15%	15%	15%	15%	15%	15%	15%	15%
CALCIUM	10%	20%	10%	20%	10%	20%	10%	20%
IRON	20%	20%	20%	20%	20%	20%	20%	20%
VITAMIN D	*	10%	*	10%	*	10%	*	10%
VITAMIN B_6	20%	20%	20%	20%	20%	20%	20%	20%
FOLIC ACID	20%	20%	20%	20%	20%	20%	20%	20%
PHOSPHORUS	6%	15%	6%	15%	6%	15%	6%	15%

*CONTAINS LESS THAN 2% OF THE U.S. RDA FOR THIS NUTRIENT
A SERVING CONTAINS ABOUT 0.3 g OF FIBER

REGULAR FLAVOR INGREDIENTS SPECIALLY PROCESSED ROLLED OATS, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, CARAMEL FLAVOR, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID

CINNAMON & SPICE INGREDIENTS SPECIALLY PROCESSED ROLLED OATS, SUGAR, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, CINNAMON, NATURAL SPICE FLAVORING, CARAMEL FLAVOR, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID

ARTIFICIAL MAPLE & BROWN SUGAR INGREDIENTS SPECIALLY PROCESSED ROLLED OATS, SUGAR, ARTIFICIAL FLAVORS, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID

APPLES & CINNAMON AND ARTIFICIAL APPLE FLAVOR INGREDIENTS SPECIALLY PROCESSED ROLLED OATS, SUGAR, DEHYDRATED APPLE FLAKES, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, CINNAMON, ARTIFICIAL FLAVOR, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID

(68) Which of the following conclusions about the products is most accurate to reach from the information on the package label given above?

1 = All four products are good sources of vitamin D.
2 = All four products provide the U.S. RDA for vitamin C.
3 = Product A is better than Products B, C, and D for a person on a weight-reduction diet.
4 = Product A is better than Products B, C, and D in protein content.

(69) Which of the following conclusions about the ingredients of these products is most accurate to reach from the information on the package label given above?

1 = All four products have more oats than any other ingredient.
2 = No artificial preservatives, flavors, or colors have been used.
3 = The cereals are 40% sugar.
4 = The products naturally contain many of the B vitamins.

(cc 70 = 1)

(cc 71-73) ______________________ Code

(cc 74-77) ______________________ ID

(*Do not write above this line.*)

SECTION IV

Directions: For each item in this section (Questions 1A-3A), circle the number of the response choice which is the best description of you or your situation.

(cc 1) (1A) What is your relationship to the student for whom you are completing this questionnaire?

1 = Parent or guardian
2 = Grandparent
3 = Brother or sister
4 = Other (Specify: ______________________________)

(cc 2) (2A) What is your gender (sex)?

1 = Male
2 = Female

(cc 3-4) (3A) What is the grade level of the child for whom you are completing this questionnaire?

00 = Kindergarten
01 = Grade 1
02 = Grade 2
03 = Grade 3
04 = Grade 4
05 = Grade 5
06 = Grade 6
07 = Grade 7
08 = Grade 8
09 = Grade 9
10 = Grade 10
11 = Grade 11
12 = Grade 12

Directions: For each item in this section (Questions 4A-6A), write the answer in the blank provided below the question.

(cc 5-6) (4A) How many children do you have (including the child for whom you are completing this questionnaire)?

_______________________ children

(cc 7-8) (5A) How many years of formal education have you completed (e.g., high school = 12 years, B.A. or B.S. = 16 years)?

_______________________ years

(6A) What changes, if any, would you like to make in the food service program at your child's school?

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

- -

(Do not write below this line.)

(cc 70 = 1)

(cc 71-73) _______________________ Code

(cc 74-77) _______________________ ID

THE UNIVERSITY OF TENNESSEE
College of Education · Bureau of Educational Research and Service
KNOXVILLE, TENNESSEE 37916

NUTRITION EDUCATION PROJECTS HOME ECONOMICS BUILDING

Dear Teacher:

Thank you for becoming an important part of our evaluation of the Tennessee Nutrition Education and Training Program (NET). By completing the attached questionnaire you will be helping us make sure that the Tennessee NET program is accomplishing its goals.

The foremost NET goal is to assist Tennessee's children and youth to understand the relationship of food and nutrition to total health, and to put this knowledge into practice in the selection of a nutritious diet.

Other NET goals include:

(1) providing Tennessee's teachers with accurate and current information about nutrition and human health,

(2) improving the quality and appeal of foods served in school food service programs throughout Tennessee, and

(3) achieving school, home and community support for a cooperative program of nutrition education.

During the coming years Tennessee NET, a program operated with federal funds, will offer workshops and other educational experiences designed to assist teachers, food service personnel, administrators and parents in providing the best possible nutrition education and school food service for Tennessee's children and youth. As evaluators we hope to assess the effectiveness of that training effort by comparing the knowledge of, and attitudes toward, nutrition and food service expressed by a representative sample of students, teachers, food service personnel, administrators, and parents today with their knowledge and attitudes in future years. It's today's sample we're asking you to provide; you or others associated with your school will be asked to complete the same questionnaire next year to provide the 1981 sample. Comparison of scores obtained in 1980 and in 1981 will give us important information about the effectiveness of training workshops planned for Summer 1980.

Please feel free to answer each question honestly. Neither your name nor the name of your school will be used in the analysis of responses--we need only to obtain a sample of nutrition knowledge and attitudes that is representative of the State. Return of this questionnaire signifies your willingness to participate in the NET evaluation.

Please complete the attached questionnaire and return in sealed envelope to your principal (or other designated contact person) in time for it to be picked up by the NET field assistant who will visit your school in the next few days.

THANK YOU VERY MUCH FOR SHARING YOUR TIME WITH US to benefit the Nutrition Education Program in Tennessee.

Sincerely,

Trudy W. Banta
NET Evaluation Director

SECTION I

__Directions:__ For each item in this section (Questions 1-24), mark the circle on your answer sheet which indicates how __you really feel__ about the statement, using the following scale:

1 = Strongly disagree
2 = Mildly disagree
3 = Undecided
4 = Mildly agree
5 = Strongly agree

(1) I understand the purposes and in-school activities of Tennessee's Nutrition Education and Training (NET) Program.

(2) In general, I am satisfied with the extent of my knowledge about nutrition.

(3) The undergraduate curriculum for all prospective teachers should include nutrition education.

(4) I am satisfied with the food service program in my school.

(5) School food service personnel should be responsible for planning the food service program in the school.

(6) School administrators should be involved in planning the school food service program.

(7) Teachers should be involved in planning the school food service program.

(8) Students should be involved in planning the school food service program.

(9) Parents should be involved in planning the school food service program.

(10) I would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at my expense).

(11) I would attend a nutrition training course offered in this area by the State Department of Education during the year (college credit available at my expense).

(12) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop taught in this area during the year (inservice credit available).

(13) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop in the summer (inservice credit available).

(14) Having Coke and candy machines in a school discourages the children from eating balanced meals.

1 = Strongly disagree
2 = Mildly disagree
3 = Undecided
4 = Mildly agree
5 = Strongly agree

(15) I like to keep up with new information about foods and nutrition.

(16) It bothers me to think about the food problems of people in other countries.

(17) I like to find out about the backgrounds of people who give advice about food and nutrition.

(18) Information about nutrition is one of the most important things children learn at school.

(19) Helping the children in my classes think about how eating behavior affects other people is one of my most important responsibilities as a teacher.

(20) All children should learn some food preparation skills.

(21) I like to eat a variety of foods every day.

(22) I like to help the children in my classes clarify their values about food- and nutrition-related issues.

(23) Nutrition education should be required for all children in the state.

(24) Nutrition education should be integrated into many of the subject matter areas.

SECTION II

Directions: *For each item in this section (Questions 25-43), mark the circle on your answer sheet which indicates how frequently you engage in the behavior described in that statement, using the following scale:*

1 = Never
2 = Seldom
3 = Sometimes
4 = Usually
5 = Always

(25) I eat the school lunch as provided for the children in my school.

(26) I have included nutrition in my classroom instructional activities this year.

(27) I have involved children from my classes in the food service program of the school this year (e.g., offering opinions about foods, making posters for display in the lunchroom).

(28) If the State Department of Education provided a guide for the teaching of nutrition as part of existing subject matter, I would use it in teaching my classes.

(29) School food service personnel are responsible for planning the food service program in my school.

(30) School administrators are involved in planning the food service program in my school.

(31) Teachers are involved in planning the food service program in my school.

(32) Students are invovled in planning the food service program in my school.

(33) Parents are involved in planning the food service program in my school.

1 = *Never*
2 = *Seldom*
3 = *Sometimes*
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(34) I try to eat foods which will be best to keep me healthy.

(35) I try to set a good example for the children in my classes with the foods I eat.

(36) I encourage the children in my classes to try foods they have not eaten before.

(37) I get useful information about foods and nutrition from TV.

(38) I try to help the children in my classes develop good eating habits.

(39) I work with the other personnel in my school in planning our nutrition education program.

(40) I try to get the children in my classes to think about the food problems of other people.

(41) I use nutrition examples to teach other subject matter areas to the children in my classes.

(42) I try to find out about what the children in my classes are interested in learning about nutrition.

(43) I encourage the children in my classes to eat a variety of foods every day.

SECTION III

Directions: *For each item in this section (Questions 44-73), mark the circle on your answer sheet which corresponds to the best (most correct) of the four response choices.*

(44) What is the best way to get all the nutrients you need every day?

1 = Drink lots of milk.
2 = Eat different kinds of foods.
3 = Eat lots of meat.
4 = Take vitamin pills.

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3 = Both Karen and Bill
4 = All the students

(65) Which of these foods should be cooked before it is safe to eat?

1 = Cabbage
2 = Egg
3 = Green beans
4 = Spinach

(66) What foods are needed by a 3-month-old infant?

1 = Breast milk or formula only
2 = Breast milk or formula and enriched cereal
3 = Enriched cereal, pureed vegetables, orange juice, and milk
4 = Some foods from each of the Four Food Groups

Use the following package label to answer Questions 67 and 68:

NUTRITION INFORMATION PER SERVING

	REGULAR FLAVOR (Product A)		CINNAMON & SPICE (Product B)		ARTIFICIAL MAPLE & BROWN SUGAR (Product C)		APPLES & CINNAMON (Product D)	
SERVING SIZE (1 PACKET)	1 OZ.		1-5/8 OZ.		1-1/2 OZ.		1-1/4 OZ.	
SERVINGS PER CONTAINER	2		2		2		2	
	PER 1 OZ. CEREAL	PER 1 OZ. CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1⅝ OZ. CEREAL	PER 1⅝ OZ. CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1½ OZ. CEREAL	PER 1½ OZ. CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1¼ OZ. CEREAL	PER 1¼ OZ. CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK
CALORIES	110	190	180	260	160	240	140	220
PROTEIN	4 g	9 g	5 g	9 g	5 g	9 g	4 g	8 g
CARBOHYDRATE	18 g	24 g	35 g	41 g	32 g	38 g	26 g	32 g
FAT	2 g	7 g	2 g	6 g	2 g	6 g	2 g	6 g

PERCENTAGE OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA)

	A		B		C		D	
PROTEIN	6%	15%	8%	20%	8%	15%	6%	15%
VITAMIN A	20%	20%	20%	20%	20%	20%	20%	20%
VITAMIN C	*	*	*	*	*	*	*	*
THIAMINE	20%	20%	20%	20%	20%	20%	20%	20%
RIBOFLAVIN	10%	20%	10%	20%	10%	20%	10%	20%
NIACIN	15%	15%	15%	15%	15%	15%	15%	15%
CALCIUM	10%	20%	10%	20%	10%	20%	10%	20%
IRON	20%	20%	20%	20%	20%	20%	20%	20%
VITAMIN D	*	10%	*	10%	*	10%	*	10%
VITAMIN B6	20%	20%	20%	20%	20%	20%	20%	20%
FOLIC ACID	20%	20%	20%	20%	20%	20%	20%	20%
PHOSPHORUS	6%	15%	6%	15%	6%	15%	6%	15%

*CONTAINS LESS THAN 2% OF THE U.S. RDA FOR THIS NUTRIENT
A SERVING CONTAINS ABOUT 0.3 g OF FIBER

REGULAR FLAVOR INGREDIENTS: SPECIALLY PROCESSED ROLLED OATS, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, CARAMEL FLAVOR, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID.

CINNAMON & SPICE INGREDIENTS: SPECIALLY PROCESSED ROLLED OATS, SUGAR, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, CINNAMON, NATURAL SPICE FLAVORING, CARAMEL FLAVOR, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID.

ARTIFICIAL MAPLE & BROWN SUGAR INGREDIENTS: SPECIALLY PROCESSED ROLLED OATS, SUGAR, ARTIFICIAL FLAVORS, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID.

APPLES & CINNAMON AND ARTIFICIAL APPLE FLAVOR INGREDIENTS: SPECIALLY PROCESSED ROLLED OATS, SUGAR, DEHYDRATED APPLE FLAKES, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, CINNAMON, ARTIFICIAL FLAVOR, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID.

(67) Which of the following conclusions about the products is most accurate to reach from the information on the package label given above?

1 = All four products are good sources of vitamin D.
2 = All four products provide the U.S. RDA for vitamin C.
3 = Product A is better than Products B, C, and D for a person on a weight-reduction diet.
4 = Product A is better than Products B, C, and D in protein content.

(68) Which of the following conclusions about the ingredients of these products is most accurate to reach from the information on the package label given above?

1 = All four products have more oats than any other ingredient.
2 = No artificial preservatives, flavors, or colors have been used.
3 = The cereals are 40% sugar.
4 = The products naturally contain many of the B vitamins.

(69) What happens to the extra protein you get in a high-protein diet if you are getting enough calories to meet your energy needs?

1 = It is changed to body fat and urea.
2 = It is excreted as protein.
3 = It is stored as protein in the liver.
4 = It is used to increase muscle.

(70) What is one reason the body needs minerals?

1 = To build muscles
2 = To control body temperature
3 = To form strong bones and teeth
4 = To provide energy

(71) Which of these cafeteria meals would provide the most nutrients?

1 = Chili, potato chips, and iced tea
2 = Cream of celery soup, cherry pie, and milk
3 = Spaghetti, french bread, and orange drink
4 = Turkey sandwich, orange, and chocolate milk

(72) Why does the U.S. government provide some people with food stamps?

1 = Farmers have extra food that needs to be distributed.
2 = People who do not have much money can get more of the food they need.
3 = The stamps can be traded for household furniture.
4 = They are a reward for people who helped elect the officials.

(73) For whom is the Four Food Groups dietary guide (Basic 4) most useful?

1 = Americans wanting a simple and quick food guide
2 = Dietitians planning diets for people with certain diseases
3 = People in other countries as well as in the U.S.
4 = Scientists studying nutrient intakes

SECTION IV

Directions: For each item in this section (Questions 1A-3A), make an "X" in the blank by the category which best describes you or your situation.

(1A) At what grade level(s) do you teach?

(1) Yes	(2) No	Grade level	(Codes)
		1	(101)
		2	(102)
		3	(103)
		4	(104)
		5	(105)
		6	(106)
		7	(107)
		8	(108)
		9	(109)
		10	(110)
		11	(111)
		12	(112)

(2A) Which of the following describe(s) your training in nutrition?

(1) Yes	(2) No	Type of background	
		I took one or more regular college courses in foods and/or nutrition.	(113)
		I studied nutrition as a part of one or more other college subjects.	(114)
		I attended nutrition workshop(s) and/or inservice training course(s).	(115)
		I studied nutrition in junior high school and/or high school.	(116)
		I learned about nutrition on my own.	(117)

(Codes)

(3A) What is the highest degree you have obtained?

______ B.A. or B.S. (K1)
______ M.A. or M.S. (K2)
______ Ed.S. (K3)
______ Ed.D. or Ph.D. (K4)
______ Other (Specify: ______________________________) (K5)

Directions: For Question 4A, make an "X" in each category that describes your situation.

(4A) What subjects do you teach and in which do you include nutrition as part of the subject?

Subject	(1) I teach this subject.	(2) I include nutrition as part of this subject.	
Reading			(118)
English/Language arts			(119)
Mathematics			(120)
Art			(121)
General health education			(122)
General science			(123)
Social studies			(124)
Physical education			(125)
Home economics			(126)
Biology			(127)
Psychology			(128)
Chemistry			(129)
Other science (Specify:)			(130)
Other (Specify:)			(131)

Directions: For each item in this section (Questions 5A-6A), write your response in the blank provided below the item.

(Codes)

(5A) How many years of teaching experience have you completed? (LM)

___________ years

(6A) What changes, if any, would you like to make in the food service program at your school?

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

THE UNIVERSITY OF TENNESSEE
College of Education - Bureau of Educational Research and Service
KNOXVILLE, TENNESSEE 37916

NUTRITION EDUCATION PROJECTS

HOME ECONOMICS BUILDING

Dear Teacher:

Thank you for becoming an important part of our evaluation of the Tennessee Nutrition Education and Training Program (NET). By completing the attached questionnaire you will be helping us make sure that the Tennessee NET program is accomplishing its goals.

The foremost NET goal is to assist Tennessee's children and youth to understand the relationship of food and nutrition to total health, and to put this knowledge into practice in the selection of a nutritious diet.

Other NET goals include:

(1) providing Tennessee's teachers with accurate and current information about nutrition and human health,

(2) improving the quality and appeal of foods served in school food service programs throughout Tennessee, and

(3) achieving school, home and community support for a cooperative program of nutrition education.

During the coming years Tennessee NET, a program operated with federal funds, will offer workshops and other educational experiences designed to assist teachers, food service personnel, administrators and parents in providing the best possible nutrition education and school food service for Tennessee's children and youth. As evaluators we hope to assess the effectiveness of that training effort by comparing the knowledge of, and attitudes toward, nutrition and food service expressed by a representative sample of students, teachers, food service personnel, administrators, and parents today with their knowledge and attitudes in future years. It's today's sample we're asking you to provide; you or others associated with your school will be asked to complete the same questionnaire next year to provide the 1981 sample. Comparison of scores obtained in 1980 and in 1981 will give us important information about the effectiveness of training workshops planned for Summer 1980.

Please feel free to answer each question honestly. Neither your name nor the name of your school will be used in the analysis of responses--we need only to obtain a sample of nutrition knowledge and attitudes that is representative of the State. Return of this questionnaire signifies your willingness to participate in the NET evaluation.

Please complete the attached questionnaire and return in sealed envelope to your principal (or other designated contact person) in time for it to be picked up by the NET field assistant who will visit your school in the next few days.

THANK YOU VERY MUCH FOR SHARING YOUR TIME WITH US to benefit the Nutrition Education Program in Tennessee.

Sincerely,

Trudy W. Banta
NET Evaluation Director

SECTION I

__Directions:__ For each item in this section (Questions 1-24), mark the circle on your answer sheet which indicates how __you really feel__ about the statement, using the following scale:

1 = Strongly disagree
2 = Mildly disagree
3 = Undecided
4 = Mildly agree
5 = Strongly agree

(1) I understand the purposes and in-school activities of Tennessee's Nutrition Education and Training (NET) Program.

(2) In general, I am satisfied with the extent of my knowledge about nutrition.

(3) The undergraduate curriculum for all prospective teachers should include nutrition education.

(4) I am satisfied with the food service program in my school.

(5) School food service personnel should be responsible for planning the food service program in the school.

(6) School administrators should be involved in planning the school food service program.

(7) Teachers should be involved in planning the school food service program.

(8) Students should be involved in planning the school food service program.

(9) Parents should be involved in planning the school food service program.

(10) I would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at my expense).

(11) I would attend a nutrition training course offered in this area by the State Department of Education during the year (college credit available at my expense.)

(12) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop taught in this area during the year (inservice credit available).

(13) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop in the summer (inservice credit available).

(14) Having Coke and candy machines in a school discourages the children from eating balanced meals.

1 = Strongly disagree
2 = Mildly disagree
3 = Undecided
4 = Mildly agree
5 = Strongly agree

(15) I like to keep up with new information about foods and nutrition.

(16) It bothers me to think about the food problems of people in other countries.

(17) I like to find out about the backgrounds of people who give advice about food and nutrition.

(18) Information about nutrition is one of the most important things students learn at school.

(19) Helping my students think about how eating behavior affects other people is one of my most important responsibilities as a teacher.

(20) All students should learn some food preparation skills.

(21) I like to eat a variety of foods every day.

(22) I like to help the students in my school clarify their values about food- and nutrition-related issues.

(23) Nutrition education should be required for all students in the state.

(24) Nutrition education should be integrated into many of the subject matter areas.

SECTION II

Directions: For each item in this section (Questions 25-43), mark the circle on your answer sheet which indicates how frequently you engage in the behavior described in that statement, using the following scale:

1 = *Never*
2 = *Seldom*
3 = *Sometimes*
4 = *Usually*
5 = *Always*

(25) I eat the school lunch as provided for the students in my school.

(26) I have included nutrition in my classroom instructional activities this year.

(27) I have involved students from my classes in the food service program of the school this year (e.g., offering opinions about foods, making posters for display in the lunchroom).

(28) If the State Department of Education provided a guide for the teaching of nutrition as part of existing subject matter, I would use it in teaching my classes.

(29) School food service personnel are responsible for planning the food service program in my school.

(30) School administrators are involved in planning the food service program in my school.

(31) Teachers are involved in planning the food service program in my school.

(32) Students are involved in planning the food service program in my school.

(33) Parents are involved in planning the food service program in my school.

1 = Never
2 = Seldom
3 = Sometimes
4 = Usually
5 = Always

(34) I try to eat foods which will be best to keep me healthy.

(35) I try to set a good example for the students in my classes with the foods I eat.

(36) I encourage the students in my classes to try foods they have not eaten before.

(37) I get useful information about foods and nutrition from TV.

(38) I try to help the students in my classes develop good eating habits.

(39) I work with the other personnel in my school in planning our nutrition education program.

(40) I try to get the students in my classes to think about the food problems of other people.

(41) I use nutrition examples to teach other subject matter areas to the students in my classes.

(42) I try to find out about what the students in my classes are interested in learning about nutrition.

(43) I encourage the students in my classes to eat a variety of foods every day.

SECTION III

__Directions:__ *For each item in this section (Questions 44-75), mark the circle on your answer sheet which corresponds to the best (most correct) of the four response choices.*

(44) What is the best way to get all the nutrients you need every day?

1 = Drink lots of milk.
2 = Eat different kinds of foods.
3 = Eat lots of meat.
4 = Take vitamin pills.

(45) Why are fast-food restaurants often cheaper places to eat than other restaurants?

1 = Their food is low in nutrients and calories.
2 = They have very few expenses.
3 = They provide few customer services.
4 = They usually are located in low-rent areas.

(46) Which of the following foods contains the most calories?

1 = 1 dinner roll
2 = 1 cup whole milk
3 = 4 ounces of steak
4 = 10 potato chips

(47) Why might two foods and nutrition textbooks have different information on adequacy of nutrient intake of children and teenagers?

1 = The author of one book had more recent information on food habits of children and teenagers.
2 = The author of one book liked children and teenagers better.
3 = The author of one book was known better.
4 = The author of one book was paid more for writing the book.

(48) Which of the following family members needs the most protein?

1 = 10-year-old daughter who takes ballet
2 = 15-year-old son who plays football
3 = 35-year-old mother who is pregnant
4 = 37-year-old father who is a farmer

(49) If fruits are preserved by freezing, which of the following characteristics usually is changed?

1 = Acidity
2 = Digestibility
3 = Nutrient content
4 = Texture

(50) Which of the following foods is the main ingredient used in the manufacture of imitation bacon?

1 = Beef
2 = Corn
3 = Milk
4 = Soybeans

(51) One family bought a big box of a new dry cereal because it had a prize in the box, but no one liked the cereal. What should they do next time they want to try a new cereal?

1 = Buy a cereal that looks like one they have tried before.
2 = Buy a cereal they can cook.
3 = Buy a small box of the new cereal.
4 = Do not buy cereal with a prize in the box.

(52) Which of these fast-food meals would provide the most nutrients?

1 = Chicken, mashed potatoes, and roll
2 = Hamburger, french fries, and Coke
3 = Hot dog and milk shake
4 = Sausage-cheese pizza and salad

(53) What is the main reason that people in Iowa do not eat as much seafood as the people in Florida?

1 = Fresh ocean fish are expensive because they have to be shipped long distances.
2 = Many people in Iowa catch their own fish in local lakes.
3 = Most people in Iowa do not like seafood.
4 = Polluted water in Iowa has caused a shortage of fish.

(54) Which of the following foods contains the most iron?

1 = Cake
2 = Hamburger
3 = Milk
4 = Pineapple

(55) What probably would happen if people in the U.S. ate more vegetable protein and less meat?

1 = Meat prices would go up.
2 = More food would be available to send to hungry people in other countries.
3 = People would not be as healthy.
4 = There would not be enough food for animals in the U.S.

(56) Which one of these people would need the most food?

1 = A baby
2 = A 6-year-old child
3 = A 10-year-old child
4 = An adult

(57) What is the most likely reason that some young people do not eat many kinds of vegetables?

1 = Their families cannot afford many kinds.
2 = They cannot get many kinds in the grocery store.
3 = They do not know how to cook many kinds.
4 = They have not learned to like many kinds.

(58) Why are nitrates used in ham and bacon?

1 = To add flavor and color and prevent bacterial growth
2 = To improve the vitamin content
3 = To increase the tenderness of the product and reduce time required for cooking
4 = To speed up the curing process

(59) What is a major reason that children choose to eat candy, potato chips, and Cokes even though they know these foods are not the most nutritious snacks?

1 = Their parents tell them to eat these foods.
2 = These foods always are cheaper than more nutritious snacks.
3 = These foods are easier to digest.
4 = They like to eat the same foods their friends do.

(60) How important is it for people in the U.S. to use vitamin and mineral supplements?

1 = Essential for everyone because the food is processed highly
2 = Necessary to ensure that the diet contains enough of the B vitamins
3 = Not necessary if the diet is planned very well
4 = Of little use because synthetic vitamins are not effective

(61) What nutritional advantage does an expensive piece of steak have compared to a cheaper piece?

1 = It probably has less fat than the cheaper piece.
2 = It probably has more protein than the cheaper piece.
3 = It probably has more vitamins and minerals than the cheaper piece.
4 = It probably has no nutritional advantage over the cheaper piece.

(62) Which of the following foods provides energy but not many nutrients?

1 = Carrot sticks
2 = Celery with cheese
3 = Hamburger
4 = Kool-Aid

(63) There has been heated debate about possible banning of Additive A in all food products. Although Additive A may be harmful to humans, several groups have protested the ban. Which of the following groups has a logical argument rather than a selfish interest?

1 = Drug companies that manufacture Additive A and claim they have found from their research that it is safe for humans
2 = Food companies that use Additive A in their products
3 = Medical authorities that argue that the alternative may be more harmful to some people than Additive A is
4 = Consumers that enjoy food products containing Additive A

(64) Three students compared what they ate for breakfast. Karen had a hard-cooked egg, tomato juice, and cereal with milk. Bill had a hamburger and a banana milkshake. Pat had toast and orange juice. Who had nutritionally balanced breakfast(s)?

1 = None of the students
2 = Only Pat
3 = Both Karen and Bill
4 = All the students

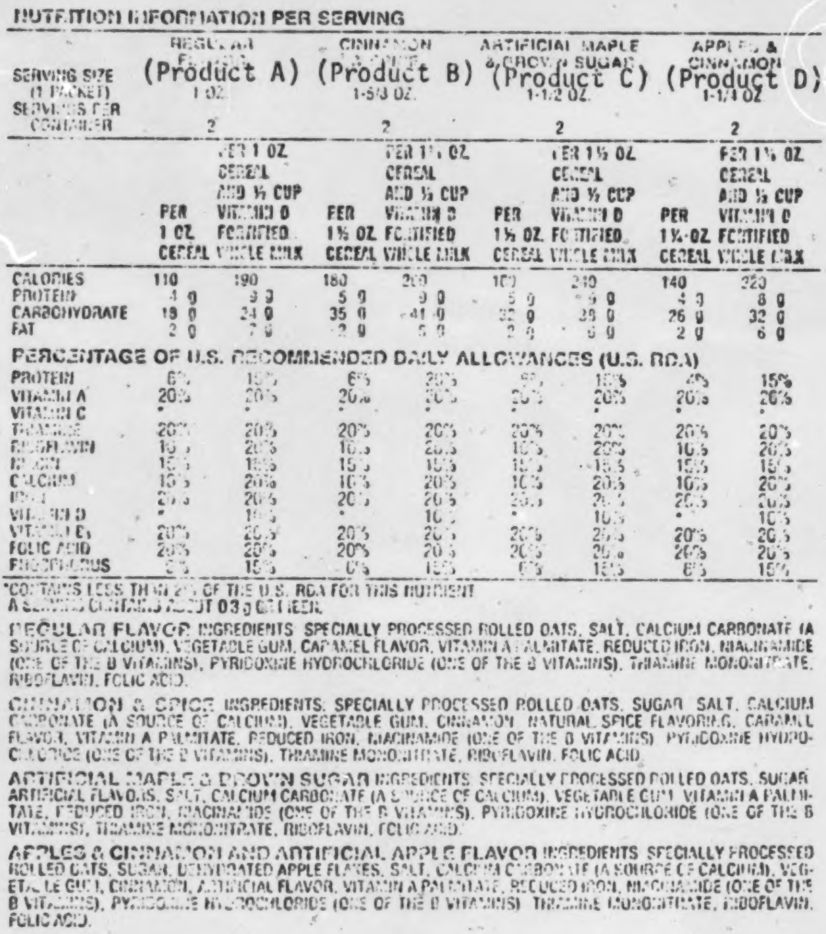
(65) Which of these foods should be cooked before it is safe to eat?

1 = Cabbage
2 = Egg
3 = Green beans
4 = Spinach

(66) What foods are needed by a 3-month-old infant?

1 = Breast milk or formula only
2 = Breast milk or formula and enriched cereal
3 = Enriched cereal, pureed vegetables, orange juice, and milk
4 = Some foods from each of the Four Food Groups

Use the following package label to answer Questions 67 and 68:



NUTRITION INFORMATION PER SERVING

	REGULAR FLAVOR (Product A)		CINNAMON & SPICE (Product B)		ARTIFICIAL MAPLE & BROWN SUGAR (Product C)		APPLES & CINNAMON (Product D)	
SERVING SIZE (1 PACKET)	1 OZ.		1-5/8 OZ.		1-1/2 OZ.		1-1/4 OZ	
SERVINGS PER CONTAINER	2		2		2		2	
	PER 1 OZ. CEREAL	PER 1 OZ. CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1⅝ OZ. CEREAL	PER 1⅝ OZ. CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1½ OZ. CEREAL	PER 1½ OZ. CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1¼ OZ. CEREAL	PER 1¼ OZ. CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK
CALORIES	110	190	180	260	160	240	140	220
PROTEIN	4 g	9 g	5 g	9 g	5 g	9 g	4 g	8 g
CARBOHYDRATE	18 g	24 g	35 g	41 g	32 g	38 g	26 g	32 g
FAT	2 g	6 g	2 g	6 g	2 g	6 g	2 g	6 g
PERCENTAGE OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA)								
PROTEIN	6%	15%	6%	20%	6%	15%	4%	15%
VITAMIN A	20%	20%	20%	20%	20%	20%	20%	20%
VITAMIN C	*	*	*	*	*	*	*	*
THIAMINE	20%	20%	20%	20%	20%	20%	20%	20%
RIBOFLAVIN	10%	20%	10%	20%	10%	20%	10%	20%
NIACIN	15%	15%	15%	15%	15%	15%	15%	15%
CALCIUM	10%	20%	10%	20%	10%	20%	10%	20%
IRON	20%	20%	20%	20%	20%	20%	20%	20%
VITAMIN D	*	10%	*	10%	*	10%	*	10%
VITAMIN B6	20%	20%	20%	20%	20%	20%	20%	20%
FOLIC ACID	20%	20%	20%	20%	20%	20%	20%	20%
PHOSPHORUS	8%	15%	8%	15%	8%	15%	8%	15%

*CONTAINS LESS THAN 2% OF THE U.S. RDA FOR THIS NUTRIENT
A SERVING CONTAINS ABOUT 0.3 g OF FIBER.

REGULAR FLAVOR INGREDIENTS: SPECIALLY PROCESSED ROLLED OATS, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, CARAMEL FLAVOR, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID.

CINNAMON & SPICE INGREDIENTS: SPECIALLY PROCESSED ROLLED OATS, SUGAR, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, CINNAMON, NATURAL SPICE FLAVORING, CARAMEL FLAVOR, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID.

ARTIFICIAL MAPLE & BROWN SUGAR INGREDIENTS: SPECIALLY PROCESSED ROLLED OATS, SUGAR, ARTIFICIAL FLAVORS, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID.

APPLES & CINNAMON AND ARTIFICIAL APPLE FLAVOR INGREDIENTS: SPECIALLY PROCESSED ROLLED OATS, SUGAR, DEHYDRATED APPLE FLAKES, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, CINNAMON, ARTIFICIAL FLAVOR, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID.

(67) Which of the following conclusions about the products is most accurate to reach from the information on the package label given above?

1 = All four products are good sources of vitamin D.
2 = All four products provide the U.S. RDA for vitamin C.
3 = Product A is better than Products B, C, and D for a person on a weight-reduction diet.
4 = Product A is better than Products B, C, and D in protein content.

(68) Which of the following conclusions about the ingredients of these products is most accurate to reach from the information on the package label given above?

1 = All four products have more oats than any other ingredient.
2 = No artificial preservatives, flavors, or colors have been used.
3 = The cereals are 40% sugar.
4 = The products naturally contain many of the B vitamins.

(69) What are the nutrient needs of a pregnant teenager?

1 = Less than those of other teenage girls her age and size to avoid excessive weight gain
2 = More than those of other girls her age and size to meet the additional needs of pregnancy
3 = The same as those of a teenage boy of the same size to give her energy for growth
4 = The same as those of any other pregnant woman to meet the standard needs of pregnancy

(70) Which of the following foods provides the most vitamin B_{12}?

1 = ½ cup turnip greens
2 = 1 cup whole milk
3 = 1 raw carrot
4 = 1 slice whole wheat bread

(71) What is the accepted relationship between nutrition and cancer?

1 = A good diet will prevent cancer but not cure it.
2 = Cancer can be cured with vitamin D.
3 = The incidence of some cancers is related to amount of fat in the diet.
4 = There is no relationship between nutrition and cancer.

(72) What happens to the extra protein you get in a high-protein diet if you are getting enough calories to meet your energy needs?

1 = It is changed to body fat and urea.
2 = It is excreted as protein.
3 = It is stored as protein in the liver.
4 = It is used to increase muscle.

(73) How do iron needs of boys and girls change as they become teenagers?

1 = Both boys and girls need more iron.
2 = Boys need more iron and girls' needs do not change.
3 = Girls need more iron and boys' needs do not change.
4 = Neither boys' nor girls' needs change.

SECTION IV

Directions: *For each item in this section (Questions 1A-3A), make an "X" in the blank by the category which best describes you or your situation.*

(1A) At what grade level(s) do you teach?

(1) Yes	(2) No	Grade level	(Codes)
		1	(101)
		2	(102)
		3	(103)
		4	(104)
		5	(105)
		6	(106)
		7	(107)
		8	(108)
		9	(109)
		10	(110)
		11	(111)
		12	(112)

(2A) Which of the following describe(s) your training in nutrition?

(1) Yes	(2) No	Type of background	
		I took one or more regular college courses in foods and/or nutrition.	(113)
		I studied nutrition as a part of one or more other college subjects.	(114)
		I attended nutrition workshop(s) and/or inservice training course(s).	(115)
		I studied nutrition in junior high school and/or high school.	(116)
		I learned about nutrition on my own.	(117)

(Codes)

(3A) What is the highest degree you have obtained?

_______ B.A. or B.S. (K1)
_______ M.A. or M.S. (K2)
_______ Ed.S. (K3)
_______ Ed.D. or Ph.D. (K4)
_______ Other (Specify: ______________________________) (K5)

Directions: *For Question 4A, make an "X" in each category that describes your situation.*

(4A) What subjects do you teach and in which do you include nutrition as part of the subject?

Subject	(1) I teach this subject.	(2) I include nutrition as part of this subject.	
Reading			(118)
English/Language arts			(119)
Mathematics			(120)
Art			(121)
General health education			(122)
General science			(123)
Social studies			(124)
Physical education			(125)
Home economics			(126)
Biology			(127)
Psychology			(128)
Chemistry			(129)
Other science (Specify:)			(130)
Other (Specify:)			(131)

__Directions:__ For each item in this section (Questions 5A-6A), write your response in the blank provided below the item.

(Codes)

(5A) How many years of teaching experience have you completed?

____________ years (LM)

(6A) What changes, if any, would you like to make in the food service program at your school?

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

THE UNIVERSITY OF TENNESSEE
College of Education - Bureau of Educational Research and Service
KNOXVILLE, TENNESSEE 37916

NUTRITION EDUCATION PROJECTS
HOME ECONOMICS EDUCATION

Dear Food Service Manager:

Thank you for becoming an important part of our evaluation of the Tennessee Nutrition Education and Training Program (NET). By completing the attached questionnaire you will be helping us make sure that the Tennessee NET program is accomplishing its goals.

The foremost NET goal is to assist Tennessee's children and youth to understand the relationship of food and nutrition to total health, and to put this knowledge into practice in the selection of a nutritious diet.

Other NET goals include:

(1) providing Tennessee's teachers with accurate and current information about nutrition and human health,

(2) improving the quality and appeal of foods served in school food service programs throughout Tennessee, and

(3) achieving school, home and community support for a cooperative program of nutrition education.

During the coming years Tennessee NET, a program operated with federal funds, will offer workshops and other educational experiences designed to assist teachers, food service personnel, administrators and parents in providing the best possible nutrition education and school food service for Tennessee's children and youth. As evaluators we hope to assess the effectiveness of that training effort by comparing the knowledge of, and attitudes toward, nutrition and food service expressed by a representative sample of students, teachers, food service personnel, administrators, and parents today with their knowledge and attitudes in future years. It's today's sample we're asking you to provide: you or others associated with your school will be asked to complete the same questionnaire next year to provide the 1981 sample. Comparison of scores obtained in 1980 and in 1981 will give us important information about the effectiveness of training workshops planned for Summer 1980.

Please feel free to answer each question honestly. Neither your name nor the name of your school will be used in the analysis of responses--we need only to obtain a sample of nutrition knowledge and attitudes that is representative of the State. Return of this questionnaire signifies your willingness to participate in the NET evaluation.

Please complete the attached questionnaire and return in sealed envelope to your principal (or other designated contact person) in time for it to be picked up by the NET field assistant who will visit your school in the next few days.

THANK YOU VERY MUCH FOR SHARING YOUR TIME WITH US to benefit the Nutrition Education Program in Tennessee.

Sincerely,

Trudy W. Banta
NET Evaluation Director

SECTION I

Directions: For each item in this section (Questions 1-23), mark the circle on your answer sheet which indicates how you really feel about the statement, using the following scale:

1 = Strongly disagree
2 = Mildly disagree
3 = Undecided
4 = Mildly agree
5 = Strongly agree

(1) In general, I am satisfied with the extent of my knowledge about nutrition.

(2) In general, I am satisfied that the other food service workers in my school know enough about nutrition.

(3) I am satisfied with the food service program in my school.

(4) School food service personnel should be responsible for planning the food service program in the school.

(5) School administrators should be invovled in planning the school food service program.

(6) Teachers should be involved in planning the school food service program.

(7) Students should be involved in planning the school food service program.

(8) Parents should be involved in planning the school food service program.

(9) I would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at my own expense).

(10) I would attend a nutrition training course offered in this area during the year by the State Department of Education (college credit available at my own expense).

(11) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop taught in this area during the year (inservice credit available).

(12) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop in the summer (inservice credit available).

(13) The Youth Advisory Council (YAC) is a good means of involving students in the scool lunch program.

1 = Strongly disagree
2 = Mildly disagree
3 = Undecided
4 = Mildly agree
5 = Strongly agree

(24) I like to keep up with new information about foods and nutrition.

(25) It bothers me to think about the food problems of people in other countries.

(26) I like to find out about the backgrounds of people who give advice about food and nutrition.

(27) Information about nutrition is one of the most important things students learn at school.

(28) Helping the students in my school think about how eating behavior affects other people is one of my most important responsibilities as a member of the food service staff.

(29) I like to eat a variety of foods every day.

(30) Ensuring food safety is one of my most important responsibilities as a food service worker.

(31) Students should have their favorite foods served in the school food service program rather than being served new foods.

(32) I enjoy learning new ways to prepare food.

(33) It bothers me when the meals served in the school lunchroom are not interesting and varied.

SECTION II

Directions: For each item in this section (Questions 34-57), mark the circle on your answer sheet which indicates how frequently you (or in some cases the students in your school) engage in the behavior described in that statement, using the following scale:

1 = Never
2 = Seldom
3 = Sometimes
4 = Usually
5 = Always

(34) Students in my school are encouraged to suggest menu items.

(35) Students in my school make posters for the cafeteria.

(36) Students in my school serve on taste panels.

(37) Students in my school are encouraged to suggest lunchroom policies or food service procedures.

(38) Students' opinions are considered in deciding what foods will be served in the food service program in my school.

(39) Students in my school volunteer (unpaid) to help clean the cafeteria.

(40) Students in my school volunteer (unpaid) to help in food preparation.

(41) Students in my school do special studies related to the school food service program (e.g., plate waste studies).

(42) I assist the teachers in my school in teaching nutrition.

(43) School food service personnel are responsible for planning the food service program in my school.

(44) School administrators are involved in planning the food service program in my school.

(45) Teachers are involved in planning the food service program in my school.

(46) Students are involved in planning the food service program in my school.

(47) Parents are involved in planning the food service program in my school.

1 = *Never*
2 = *Seldom*
3 = *Sometimes*
4 = *Usually*
5 = *Always*

(48) I try to eat foods which will be best to keep me healthy.

(49) I try to set a good example for the students in my school with the foods I eat.

(50) I encourage the students in my school to try foods they have not eaten before.

(51) I get useful information about foods and nutrition from TV.

(52) I try to help the students in my school develop good eating habits.

(53) I work with the other personnel in my school in planning our nutrition education program.

(54) I try to get the students in my school to think about the food problems of other people.

(55) I try to make mealtime pleasant for the students in my school.

(56) I encourage the students in my school to eat a variety of foods every day.

(57) I try to find out about the food preferences of students in my school.

SECTION III

__Directions:__ For each item in this section (Questions 58-87), mark the circle on your answer sheet which corresponds to the best (most correct) of the four response choices.

(58) What is the best way to get all the nutrients you need every day?

1 = Drink lots of milk.
2 = Eat different kinds of foods.
3 = Eat lots of meat.
4 = Take vitamin pills.

(59) Why are fast-food restaurants often cheaper places to eat than other restaurants?

1 = Their food is low in nutrients and calories.
2 = They have very few expenses.
3 = They provide few customer services.
4 = They usually are located in low-rent areas.

(60) Which of the following foods contains the most calories?

1 = 1 dinner roll
2 = 1 cup whole milk
3 = 4 ounces of steak
4 = 10 potato chips

(61) Why might two foods and nutrition textbooks have different information on adequacy of nutrient intake of children and teenagers?

1 = The author of one book had more recent information on food habits of children and teenagers.
2 = The author of one book liked children and teenagers better.
3 = The author of one book was known better.
4 = The author of one book was paid more for writing the book.

(62) Which of the following family members needs the most protein?

1 = 10-year-old daughter who takes ballet
2 = 15-year-old son who plays football
3 = 35-year-old mother who is pregnant
4 = 37-year-old father who is a farmer

(63) If fruits are preserved by freezing, which of the following characteristics usually is changed?

1 = Acidity
2 = Digestibility
3 = Nutrient content
4 = Texture

(64) Which of the following foods is the main ingredient used in the manufacture of imitation bacon?

1 = Beef
2 = Corn
3 = Milk
4 = Soybeans

(65) One family bought a big box of a new dry cereal because it had a prize in the box, but no one liked the cereal. What should they do next time they want to try a new cereal?

1 = Buy a cereal that looks like one they have tried before.
2 = Buy a cereal they can cook.
3 = Buy a small box of the new cereal.
4 = Do not buy cereal with a prize in the box.

(66) Which of these fast-food meals would provide the most nutrients?

1 = Chicken, mashed potatoes, and roll
2 = Hamburger, french fries, and Coke
3 = Hot dog and milk shake
4 = Sausage-cheese pizza and salad

(67) What is the main reason that people in Iowa do not eat as much seafood as the people in Florida?

1 = Fresh ocean fish are expensive because they have to be shipped long distances.
2 = Many people in Iowa catch their own fish in local lakes.
3 = Most people in Iowa do not like seafood.
4 = Polluted water in Iowa has caused a shortage of fish.

(68) Which of the following foods contains the most iron?

1 = Cake
2 = Hamburger
3 = Milk
4 = Pineapple

(69) What probably would happen if people in the U.S. ate more vegetable protein and less meat?

1 = Meat prices would go up.
2 = More food would be available to send to hungry people in other countries.
3 = People would not be as healthy.
4 = There would not be enough food for animals in the U.S.

(70) Which one of these people would need the most food?

1 = A baby
2 = A 6-year-old child
3 = A 10-year-old child
4 = An adult

(71) What is the most likely reason that some young people do not eat many kinds of vegetables?

1 = Their families cannot afford many kinds.
2 = They cannot get many kinds in the grocery store.
3 = They do not know how to cook many kinds.
4 = They have not learned to like many kinds.

(72) Why are nitrites used in ham and bacon?

1 = To add flavor and color and prevent bacterial growth
2 = To improve the vitamin content
3 = To increase the tenderness of the product and reduce time required for cooking
4 = To speed up the curing process

(73) What is a major reason that children choose to eat candy, potato chips, and Cokes even though they know these foods are not the most nutritious snacks?

1 = Their parents tell them to eat these foods.
2 = These foods always are cheaper than more nutritious snacks.
3 = These foods are easier to digest.
4 = They like to eat the same foods their friends do.

(74) How important is it for people in the U.S. to use vitamin and mineral supplements?

1 = Essential for everyone because the food is processed highly
2 = Necessary to ensure that the diet contains enough of the B vitamins
3 = Not necessary if the diet is planned very well
4 = Of little use because synthetic vitamins are not effective

(75) What nutritional advantage does an expensive piece of steak have compared to a cheaper piece?

1 = It probably has less fat than the cheaper piece.
2 = It probably has more protein than the cheaper piece.
3 = It probably has more vitamins and minerals than the cheaper piece.
4 = It probably has no nutritional advantage over the cheaper piece.

(76) Which of the following foods provides energy but not many nutrients?

1 = Carrot sticks
2 = Celery with cheese
3 = Hamburger
4 = Kool-Aid

(77) There has been heated debate about possible banning of Additive A in all food products. Although Additive A may be harmful to humans, several groups have protested the ban. Which of the following groups has a logical argument rather than a selfish interest?

1 = Drug companies that manufacture Additive A and claim they have found from their research that it is safe for humans
2 = Food companies that use Additive A in their products
3 = Medical authorities that argue that the alternative may be more harmful to some people than Additive A is
4 = Consumers that enjoy food products containing Additive A

(78) Three students compared what they ate for breakfast. Karen had a hard-cooked egg, tomato juice, and cereal with milk. Bill had a hamburger and a banana milkshake. Pat had toast and orange juice. Who had nutritionally balanced breakfast(s)?

1 = None of the students
2 = Only Pat
3 = Both Karen and Bill
4 = All the students

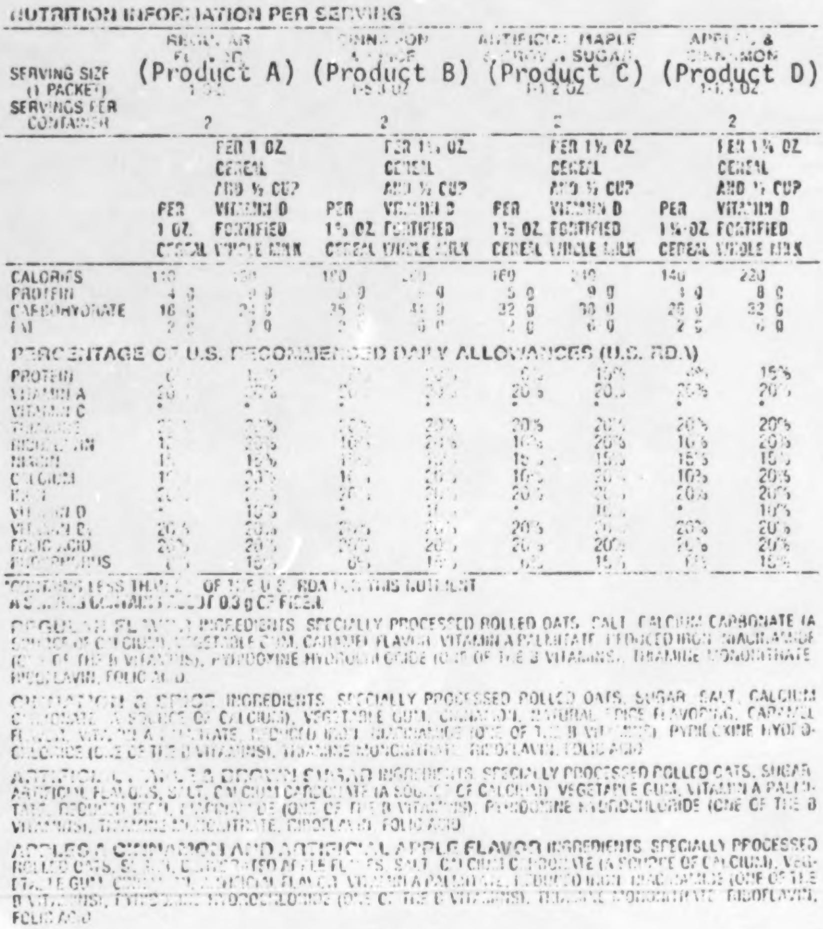
(79) Which of these foods should be cooked before it is safe to eat?

1 = Cabbage
2 = Egg
3 = Green beans
4 = Spinach

(80) What foods are needed by a 3-month-old infant?

1 = Breast milk or formula only
2 = Breast milk or formula and enriched cereal
3 = Enriched cereal, pureed vegetables, orange juice, and milk
4 = Some foods from each of the Four Food Groups

Use the following package label to answer Questions 81 and 82:



NUTRITION INFORMATION PER SERVING

	REGULAR FLAVOR (Product A)		CINNAMON & SPICE (Product B)		ARTIFICIAL MAPLE & BROWN SUGAR (Product C)		APPLES & CINNAMON (Product D)	
SERVING SIZE (1 PACKET)	1 OZ		1-5/8 OZ		1-1/2 OZ		1-1/4 OZ	
SERVINGS PER CONTAINER	2		2		2		2	
	PER 1 OZ. CEREAL	PER 1 OZ CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1⅝ OZ CEREAL	PER 1⅝ OZ CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1½ OZ CEREAL	PER 1½ OZ CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1¼ OZ CEREAL	PER 1¼ OZ CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK
CALORIES	[illegible]	[illegible]	160	[illegible]	160	240	140	220
PROTEIN	4 g	[illegible]	5 g	[illegible]	5 g	9 g	4 g	8 g
CARBOHYDRATE	18 g	24 g	35 g	41 g	32 g	38 g	26 g	32 g
FAT	2 g	7 g	2 g	6 g	2 g	6 g	2 g	6 g
PERCENTAGE OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA)								
PROTEIN	[illegible]	15%	[illegible]	20%	6%	15%	[illegible]	15%
VITAMIN A	20%	20%	20%	20%	20%	20%	20%	20%
VITAMIN C	*	*	*	*	*	*	*	*
THIAMINE	[illegible]	20%	10%	20%	20%	20%	20%	20%
RIBOFLAVIN	10%	20%	10%	20%	10%	20%	10%	20%
NIACIN	15%	15%	15%	[illegible]	15%	15%	15%	15%
CALCIUM	10%	20%	10%	20%	10%	20%	10%	20%
IRON	20%	20%	20%	20%	20%	20%	20%	20%
VITAMIN D	*	10%	*	10%	*	10%	*	10%
VITAMIN B6	20%	20%	20%	20%	20%	20%	20%	20%
FOLIC ACID	20%	20%	20%	20%	20%	20%	20%	20%
PHOSPHORUS	6%	15%	6%	15%	6%	15%	[illegible]	15%

*CONTAINS LESS THAN 2% OF THE U.S. RDA FOR THIS NUTRIENT
A SERVING CONTAINS ABOUT 0.3 g OF FIBER.

REGULAR FLAVOR INGREDIENTS: SPECIALLY PROCESSED ROLLED OATS, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, CARAMEL FLAVOR, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID.

CINNAMON & SPICE INGREDIENTS: SPECIALLY PROCESSED ROLLED OATS, SUGAR, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, CINNAMON, NATURAL SPICE FLAVORING, CARAMEL FLAVOR, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID.

ARTIFICIAL MAPLE & BROWN SUGAR INGREDIENTS: SPECIALLY PROCESSED ROLLED OATS, SUGAR, ARTIFICIAL FLAVORS, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID.

APPLES & CINNAMON AND ARTIFICIAL APPLE FLAVOR INGREDIENTS: SPECIALLY PROCESSED ROLLED OATS, SUGAR, DEHYDRATED APPLE FLAKES, SALT, CALCIUM CARBONATE (A SOURCE OF CALCIUM), VEGETABLE GUM, CINNAMON, ARTIFICIAL FLAVOR, VITAMIN A PALMITATE, REDUCED IRON, NIACINAMIDE (ONE OF THE B VITAMINS), PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS), THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID.

(81) Which of the following conclusions about the products is most accurate to reach from the information on the package label given above?

1 = All four products are good sources of vitamin D.
2 = All four products provide the U.S. RDA for vitamin C.
3 = Product A is better than Products B, C, and D for a person on a weight-reduction diet.
4 = Product A is better than Products B, C, and D in protein content.

(82) Which of the following conclusions about the ingredients of these products is most accurate to reach from the information on the package label given above?

1 = All four products have more oats than any other ingredient.
2 = No artificial preservatives, flavors, or colors have been used.
3 = The cereals are 40% sugar.
4 = The products naturally contain many of the B vitamins.

(83) From which food group of the U.S. Department of Agriculture Daily Food Guide would a teenager not need to select at least four servings per day?

1 = Bread and cereal group
2 = Meat group
3 = Milk group
4 = Vegetable and fruit group

(84) Which of the following probably would be the best source of information about the nutritional value of different cereals?

1 = An advertisement in a newspaper
2 = A booklet prepared by a cereal company to give information about its products
3 = A newspaper article by a nutritionist
4 = A science textbook

(85) What are the nutrient needs of a pregnant teenager?

1 = Less than those of other teenage girls her age and size to avoid excessive weight gain
2 = More than those of other girls her age and size the meet the additional needs of pregnancy
3 = The same as those of a teenage boy of the same size to give her energy for growth
4 = The same as those of any other pregnant woman to meet the standard needs of pregnancy

(86) Which of the following nutrients is most likely to be lost in cooking fruits and vegetables?

1 = Calcium
2 = Iron
3 = Vitamin A
4 = Vitamin C

(87) Which of these cafeteria meals would provide the most nutrients?

1 = Chili, potato chips, and iced tea
2 = Cream of celery soup, cherry pie, and milk
3 = Spaghetti, french bread, and orange drink
4 = Turkey sandwich, orange, and chocolate milk

SECTION IV

Directions: For each item in this section (Questions 88-93), mark the circle on your answer sheet which indicates whether you have each of the indicated food service programs in your school, using the following scale:

1 = No
2 = Yes

(88) Does your school have a Type A school lunch program?

(89) Does your school have a fast food line?

(90) Does your school have a salad bar?

(91) Does your school have an offer vs. serve plan?

(92) Does your school have a special milk program?

(93) Does your school have a breakfast program?

Directions: For each item in this section (Questions 94-100), mark the circle on your answer sheet which indicates the percentage of students in your school that eat lunch from each of the indicated sources, using the following scale:

1 = 0% - 19%
2 = 20% - 39%
3 = 40% - 59%
4 = 60% - 79%
5 = 80% - 100%

(94) About what percentage of students in your school usually bring their lunches?

(95) About what percentage of students in your school usually leave the school grounds for lunch?

(96) About what percentage of students in your school usually eat the plate lunch in the lunchroom?

(97) About what percentage of students in your school usually eat from the fast food line in the lunchroom?

(98) About what percentage of students in your school usually eat from the salad bar in the lunchroom?

(99) About what percentage of students in your school usually eat lunch from Coke and candy machines?

(100) About what percentage of students in your school usually skip lunch?

SECTION V

__Directions:__ For each item in this section (Questions 1A-3A), make an "X" in the blank by the category which describes you best.

(Codes)

(1A) What is your position in the school food service program?

______ Food service manager (local) (A1)

______ Food service supervisor (system) (A2)

______ Food service worker (local) (A3)

______ Other (Specify: ______________________________) (A4)

(2A) Which of the following describe(s) your training in nutrition?

(1) Yes	(2) No	Type of background	
		I took one or more regular college courses in foods and/or nutrition.	(101)
		I studied nutrition as a part of one or more other college subjects.	(102)
		I have attended nutrition workshop(s) and/or inservice training course(s).	(103)
		I studied nutrition in junior high school and/or high school.	(104)
		I learned about nutrition on my own.	(105)

(3A) What is the highest level of education you have completed?

______ Less than 12 years (less than completion of high school) (K1)

______ High school diploma or G.E.D. (K2)

______ Technical degree (e.g., A.D., A.A.S.) (K3)

______ B.A. or B.S. (K4)

______ M.A. or M.S. (K5)

______ Ed.S. (K6)

______ Ed.D. or Ph.D. (K7)

______ Other (Specify: ______________________) (K8)

Directions: *For each item in this section (Questions 4A-5A), write the answer in the blank provided below the question.*

(Codes)

(4A) How many years of food service experience have you completed?

_______ years (LM)

(5A) What changes, if any, would you like to make in the food service program at your school?

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

THE UNIVERSITY OF TENNESSEE
College of Education · Bureau of Educational Research and Service
KNOXVILLE, TENNESSEE 37916

Dear Food Service Worker:

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(1) providing Tennessee's teachers with accurate and current information about nutrition and human health,

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Please feel free to answer each question honestly. Neither your name nor the name of your school will be used in the analysis of responses--we need only to obtain a sample of nutrition knowledge and attitudes that is representative of the State. Return of this questionnaire signifies your willingness to participate in the NET evaluation.

Please complete the attached questionnaire and return in sealed envelope to your principal (or other designated contact person) in time for it to be picked up by the NET field assistant who will visit your school in the next few days.

THANK YOU VERY MUCH FOR SHARING YOUR TIME WITH US to benefit the Nutrition Education Program in Tennessee.

Sincerely,

Trudy W. Banta
NET Evaluation Director

SECTION I

__Directions:__ *For each item in this section (Questions 1-23), mark the circle on your answer sheet which indicates how* *__you really feel__* *about the statement, using the following scale:*

1 = Strongly disagree
2 = Mildly disagree
3 = Undecided
4 = Mildly agree
5 = Strongly agree

(1) In general, I am satisfied with the extent of my knowledge about nutrition.

(2) In general, I am satisfied that the other food service workers in my school know enough about nutrition.

(3) I am satisfied with the food service program in my school.

(4) School food service personnel should be responsible for planning the food service program in the school.

(5) School administrators should be invovled in planning the school food service program.

(6) Teachers should be involved in planning the school food service program.

(7) Students should be involved in planning the school food service program.

(8) Parents should be involved in planning the school food service program.

(9) I would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at my own expense).

(10) I would attend a nutrition training course offered in this area during the year by the State Department of Education (college credit available at my own expense).

(11) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop taught in this area during the year (inservice credit available).

(12) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop in the summer (inservice credit available).

(13) The Youth Advisory Council (YAC) is a good means of involving students in the scool lunch program.

1 = Strongly disagree
2 = Mildly disagree
3 = Undecided
4 = Mildiy agree
5 = Strongly agree

(24) I like to keep up with new information about foods and nutrition.

(25) It bothers me to think about the food problems of people in other countries.

(26) I like to find out about the backgrounds of people who give advice about food and nutrition.

(27) Information about nutrition is one of the most important things students learn at school.

(28) Helping the students in my school think about how eating behavior affects other people is one of my most important responsibilities as a member of the food service staff.

(29) I like to eat a variety of foods every day.

(30) Ensuring food safety is one of my most important responsibilities as a food service worker.

(31) Students should have their favorite foods served in the school food service program rather than being served new foods.

(32) I enjoy learning new ways to prepare food.

(33) It bothers me when the meals served in the school lunchroom are not interesting and varied.

SECTION II

Directions: *For each item in this section (Questions 34-47), mark the circle on your answer sheet which indicates how* ***frequently*** *you (or in some cases the students in your school) engage in the behavior described in that statement, using the following scale:*

1 = Never
2 = Seldom
3 = Sometimes
4 = Usually
5 = Always

(34) Students in my school are encouraged to suggest menu items.

(35) Students in my school make posters for the cafeteria.

(36) Students in my school serve on taste panels.

(37) Students in my school are encouraged to suggest lunchroom policies or food service procedures.

(38) Students' opinions are considered in deciding what foods will be served in the food service program in my school.

(39) Students in my school volunteer (unpaid) to help clean the cafeteria.

(40) Students in my school volunteer (unpaid) to help in food preparation.

(41) Students in my school do special studies related to the school food service program (e.g., plate waste studies).

(42) I assist the teachers in my school in teaching nutrition.

(43) School food service personnel are responsible for planning the food service program in my school.

(44) School administrators are involved in planning the food service program in my school.

(45) Teachers are involved in planning the food service program in my school.

(46) Students are involved in planning the food service program in my school.

(47) Parents are involved in planning the food service program in my school.

1 = Never
2 = Seldom
3 = Sometimes
4 = Usually
5 = Always

(48) I try to eat foods which will be best to keep me healthy.

(49) I try to set a good example for the students in my school with the foods I eat.

(50) I encourage the students in my school to try foods they have not eaten before.

(51) I get useful information about foods and nutrition from TV.

(52) I try to help the students in my school develop good eating habits.

(53) I work with the other personnel in my school in planning our nutrition education program.

(54) I try to get the students in my school to think about the food problems of other people.

(55) I try to make mealtime pleasant for the students in my school.

(56) I encourage the students in my school to eat a variety of foods every day.

(57) I try to find out about the food preferences of students in my school.

SECTION III

Directions: *For each item in this section (Questions 1A-3A), make an "X" in the blank by the category which describes you best.*

(Codes)

(1A) What is your position in the school food service program?

______ Food service manager (local) (A1)
______ Food service supervisor (system) (A2)
______ Food service worker (local) (A3)
______ Other (Specify: ______________________________) (A4)

(2A) Which of the following describe(s) your training in nutrition?

(1) Yes	(2) No	Type of background	
		I took one or more regular college courses in foods and/or nutrition.	(101)
		I studied nutrition as a part of one or more other college subjects.	(102)
		I have attended nutrition workshop(s) and/or inservice training course(s).	(103)
		I studied nutrition in junior high school and/or high school.	(104)
		I learned about nutrition on my own.	(105)

(3A) What is the highest level of education you have completed?

______ Less than 12 years (less than completion of high school) (K1)
______ High school diploma or G.E.D. (K2)
______ Technical degree (e.g., A.D., A.A.S.) (K3)
______ B.A. or B.S. (K4)
______ M.A. or M.S. (K5)
______ Ed.S. (K6)
______ Ed.D. or Ph.D. (K7)
______ Other (Specify: ______________________) (K8)

Directions: For each item in this section (Questions 4A-5A), write the answer in the blank provided below the question.

(Codes)

(4A) How many years of food service experience have you completed?

_______ years (LM)

(5A) What changes, if any, would you like to make in the food service program at your school?

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

THE UNIVERSITY OF TENNESSEE
College of Education · Bureau of Educational Research and Service
KNOXVILLE, TENNESSEE 37916

NUTRITION EDUCATION PROJECTS
HOME ECONOMICS BUILDING

Dear Administrator:

Thank you for becoming an important part of our evaluation of the Tennessee Nutrition Education and Training Program (NET). By completing the attached questionnaire you will be helping us make sure that the Tennessee NET program is accomplishing its goals.

The foremost NET goal is to assist Tennessee's children and youth to understand the relationship of food and nutrition to total health, and to put this knowledge into practice in the selection of a nutritious diet.

Other NET goals include:

(1) providing Tennessee's teachers with accurate and current information about nutrition and human health,

(2) improving the quality and appeal of foods served in school food service programs throughout Tennessee, and

(3) achieving school, home and community support for a cooperative program of nutrition education.

During the coming years Tennessee NET, a program operated with federal funds, will offer workshops and other educational experiences designed to assist teachers, food service personnel, administrators and parents in providing the best possible nutrition education and school food service for Tennessee's children and youth. As evaluators we hope to assess the effectiveness of that training effort by comparing the knowledge of, and attitudes toward, nutrition and food service expressed by a representative sample of students, teachers, food service personnel, administrators, and parents today with their knowledge and attitudes in future years. It's today's sample we're asking you to provide; you or others associated with your school will be asked to complete the same questionnaire next year to provide the 1981 sample. Comparison of scores obtained in 1980 and in 1981 will give us important information about the effectiveness of training workshops planned for Summer 1980.

Please feel free to answer each question honestly. Neither your name nor the name of your school will be used in the analysis of responses--we need only to obtain a sample of nutrition knowledge and attitudes that is representative of the State. Return of this questionnaire signifies your willingness to participate in the NET evaluation.

Please complete the attached questionnaire and have it, and those of other adults in your school, ready for pick-up by the NET field assistant who will visit your school in the next few days.

THANK YOU VERY MUCH FOR SHARING YOUR TIME WITH US to benefit the Nutrition Education Program in Tennessee.

Sincerely,
Trudy W. Banta
Trudy W. Banta
NET Evaluation Director

SECTION I

Directions: *For each item in this section (Questions 1-30), mark the circle on your answer sheet which indicates how you really feel about the statement, using the following scale:*

1 = Strongly disagree
2 = Mildly disagree
3 = Undecided
4 = Mildly agree
5 = Strongly agree

(1) I understand the purposes and in-school activities of Tennessee's Nutrition Education and Training (NET) Program.

(2) In general, I am satisfied that the teachers in my school know enough about nutrition.

(3) The undergraduate curriculum for all prospective teachers should include nutrition education.

(4) I am satisfied with the food service program in my school.

(5) The school breakfast program is appropriate to offer the students in my school.

(6) The teachers in my school teach nutrition in some form.

(7) School food service personnel should be responsible for planning the food service program in the school.

(8) School administrators should be involved in planning the school food service program.

(9) Teachers should be involved in planning the school food service program.

(10) Students should be involved in planning the school food service program.

(11) Parents should be involved in planning the school food service program.

(12) The teachers in my school would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at the teachers' expense).

(13) The teachers in my school would attend a nutrition training course offered in this area by the State Department of Education during the year (college credit available at the teachers' expense).

(14) The teachers in my school would attend a nutrition training course provided by the State Department of Education as a noncredit workshop taught in this area during the year (inservice credit available).

(15) The teachers in my school would attend a nutrition training course provided by the State Department of Education as a noncredit workshop in the summer (in-service credit available).

1 = Strongly disagree
2 = Mildly disagree
3 = Undecided
4 = Mildly agree
5 = Strongly agree

(16) The students in my school should learn about the relationship between nutrition and health.

(17) The students in my school should learn about various factors affecting food-related behavior.

(18) The students in my school should learn about food characteristics and how they affect food selection, storage, and preparation.

(19) The students in my school should learn how to solve food- and nutrition-related consumer and health problems.

(20) I like to keep up with new information about foods and nutrition.

(21) It bothers me to think about the food problems of people in other countries.

(22) I like to find out about the backgrounds of people who give advice about food and nutrition.

(23) Information about nutrition is one of the most important things students learn at school.

(24) Helping the students in my school think about how eating behavior affects other people is one of my most important responsibilities as an administrator.

(25) Nutrition education should be integrated into many of the subject matter areas

(26) Working with the food service personnel in my school to plan and evaluate the food service program is one of my most important responsibilities.

(27) Nutrition education should be required for all students in the state.

(28) All students should learn some food preparation skills.

(29) The students in my school should be helped to clarify their values about food- and nutrition-related issues.

(30) Students should have their favorite foods served in the school food service program rather than being served new foods.

SECTION II

__Directions:__ For each item in this section (Questions 31-55), mark the circle on your answer sheet which indicates how __frequently__ you (or in some cases others in your school) engage in the behavior described in the statement, using the following scale:

1 = Never
2 = Seldom
3 = Sometimes
4 = Usually
5 = Always

(31) I eat the school lunch as provided for the students in my school.

(32) If the State Department of Education provided a guide for the teaching of nutrition as part of existing subject matter, teachers in my school would use it in teaching their classes.

(33) Students in my school are encouraged to suggest menu items.

(34) Students in my school make posters for the cafeteria.

(35) Students in my school serve on taste panels.

(36) Students in my school are encouraged to suggest lunchroom policies or food service procedures.

(37) Students' opinions are considered in deciding what foods will be served in the the food service program in my school.

(38) Students in my school volunteer (unpaid) to help clean the cafeteria.

(39) Students in my school volunteer (unpaid) to help in food preparation.

(40) Students in my school do special studies related to the school food service program (e.g., plate waste studies).

(41) School food service personnel are responsible for planning the food service program in my school.

(42) School administrators are involved in planning the food service program in my school.

(43) Teachers are involved in planning the food service program in my school.

(44) Students are involved in planning the food service program in my school.

(45) Parents are involved in planning the food service program in my school.

1 = Never
2 = Seldom
3 = Sometimes
4 = Usually
5 = Always

(46) I try to eat foods which will be best to keep me healthy.

(47) I try to set a good example for the students in my school with the foods I eat.

(48) I encourage the students in my school to try foods they have not eaten before.

(49) I get useful information about foods and nutrition from TV.

(50) I try to help the students in my school develop good eating habits.

(51) I try to make mealtime pleasant for the students in my school.

(52) I work with the other personnel in my school in planning our nutrition education program.

(53) I try to get the students in my school to think about the food problems of other people.

(54) I try to find out what the students in my school are interested in learning about nutrition.

(55) I encourage the teachers in my school to use nutrition examples to teach other subject matter areas.

SECTION III

Directions: For each item in this section (Questions 1A-3A), make an "X" in the blank by the category which describes you or your situation best.

(1A) What is your position in the school?

______	Principal	(A1)
______	Assistant principal	(A2)
______	Curriculum specialist/supervisor	(A3)
______	Subject area specialist/supervisor	(A4)
______	Other (Specify: ________________________)	(A5)

(2A) What is the highest degree you have obtained?

______	B.A. or B.S.	(K1)
______	M.A. or M.S.	(K2)
______	Ed.S.	(K3)
______	Ed.D. or Ph.D.	(K4)
______	Other (Specify: ________________________)	(K5)

(3A) What times are the Coke and candy machines or snack food sales available to the students in your school?

(1) Yes	(2) No	Time	
		Before school hours	(101)
		During school hours	(102)
		During lunch hours	(103)
		After the last lunch period	(104)
		After school hours	(105)
		Other (Specify:	(106)

Directions: *For each item in this section (Questions 4A-6A), write the answer in the blank provided below the question.*

(Codes)

(4A) How many years of school administrative experience have you completed? (LM)

__________ years

(5A) What changes, if any, would you like to make in the food service program at your school?

(6A) What are the main needs of students in your school related to nutrition education?

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

THE UNIVERSITY OF TENNESSEE
College of Education - Bureau of Educational Research and Service
KNOXVILLE, TENNESSEE 37916

NUTRITION EDUCATION PROJECTS
HOME ECONOMICS BUILDING

Dear Student,

We are very happy that your school has agreed to let us study what you, your teachers, the principal, and the food service workers know and think about nutrition. Your answers on this questionnaire will help us know what to teach about nutrition in school, and what the adults in your school need to know about nutrition to help you learn. You will be helping us evaluate the Tennessee Nutrition Education and Training Program (NET). The main goal of NET is to help Tennessee's children and youth to understand the relationship of food and nutrition to total health, and to use this knowledge to select a nutritious diet.

Please answer the questions on this questionnaire for students. Do not write your name on the questionnaire - we will not let anyone know what your responses were. All the answers of students in your grade will be put together so we can see what a student about your age knows and thinks about nutrition.

If you complete this questionnaire and return it to your teacher, that will show that you are willing to let us use your answers in this study. You do have the right to not complete the questionnaire, or to stop working on it if you decide later you do not wish to help on the study, without any bad feelings from us or your teacher.

Thank you for your time. We will be very interested in seeing what you know and think about nutrition!

Sincerely,

Trudy W. Banta

Trudy W. Banta
NET Evaluation Director

SECTION I

Directions: For each item in this section (Questions 1-17), mark the circle on your answer sheet which indicates how you really feel about the statement, using the following scale:

1 = Strongly disagree
2 = Mildly disagree
3 = Undecided
4 = Mildly agree
5 = Strongly agree

(1) I like the quality and variety of food and the way it is served in the food service program at my school.

(2) The food in the cafeteria at school does not look very good.

(3) The food in the school cafeteria costs too much.

(4) It is more fun to eat away from school than to eat in the cafeteria.

(5) The cafeteria at my school is not a nice place to eat.

(6) The line in the cafeteria at my school is usually too long.

(7) I like to help decide what foods will be fixed for lunch at my school.

(8) I would rather take vitamin pills than learn to eat new foods.

(9) I would rather have Coke than milk with a meal.

(10) I like to think about the nutrients in foods when I am deciding what to eat.

(11) I like to read the labels on foods before I decide what to buy.

(12) I like to figure out the best way to use my resources when I am making a decision about a food-related issue.

(13) I like to find out about the backgrounds of people who give advice about food and nutrition.

(14) I am interested in how a menu can be changed to meet the needs of different groups.

(15) I like to think about how political issues are related to ideas about food and nutrition.

(16) I like to know about foods that are good for me.

(17) I like to eat many different kinds of fruits and vegetables.

SECTION II

Directions: For each item in this section (Questions 18-37), mark the circle on your answer sheet which indicates how frequently you engage in the behavior described in that statement, using the following scale:

1 = Never
2 = Seldom
3 = Sometimes
4 = Usually
5 = Always

(18) I eat the plate lunch served in the cafeteria at my school.

(19) I eat foods from the fast food line in the cafeteria at my school.

(20) I eat foods from the salad bar in the cafeteria at my school.

(21) I buy the foods I eat for lunch from the Coke and candy machines at my school.

(22) I bring my lunch and eat at school.

(23) I eat my lunch at home.

(24) I eat lunch at a store or restaurant away from my school.

(25) Students at my school participate in a Youth Advisory Council (YAC) or other student organization that helps plan school lunches.

(26) I help decide what foods will be served for lunch at my school.

(27) I learn at school about foods that are good for me.

(28) I think about the nutrients in foods when I am trying to decide what to eat.

(29) I read labels on food packages before deciding what to buy.

(30) I avoid eating certain foods because of problems of the world food supply.

(31) I try to get information about food and nutrition from community and government agencies.

(32) I try to consider the impact of my choices on other people when I am deciding how to make my own food and nutrition decisions.

(33) I talk to someone at home about foods that are good for me.

(34) I eat almost any vegetable.

(35) When I eat away from home, I choose foods from a menu which are best for meeting my own nutrient and caloric needs.

(36) I try to figure out why different sources sometimes have different information about food and nutrition.

(37) I try to avoid foods with additives and preservatives.

SECTION III

Directions: For each item in this section (Questions 38-62), mark the circle on your answer sheet which corresponds to the best (most correct) of the four response choices.

(38) Which of the following would be the safest and most effective way to lose weight?

1 = Eat only one meal per day.
2 = Eliminate carbohydrates from the diet.
3 = Limit the diet to foods high in protein.
4 = Reduce the overall daily intake of calories.

(39) If fruits are preserved by freezing, which of the following characteristics usually is changed?

1 = Acidity
2 = Digestibility
3 = Nutrient content
4 = Texture

(40) Which of the following forms of potatoes has the highest ratio of nutrients to calories?

1 = Baked potato
2 = French fries
3 = Potato chips
4 = Potato salad

(41) What probably would happen if people in the U.S. ate more vegetable protein and less meat?

1 = Meat prices would go up.
2 = More food would be available to send to hungry people in other countries.
3 = People would not be as healthy.
4 = There would not be enough food for animals in the U.S.

Use the following menu for a family dinner to answer Questions 42 and 43:

Tomato Juice
Fried Chicken
Baked Potato   *Broccoli*
Sour Cream
Chocolate Cake
Milk

(42) Given the menu above, what would be best for the teenage daughter who needs to lose 5 pounds to do for dinner?

1 = Eat only the fried chicken because it is high in protein.
2 = Eat only the tomato juice and broccoli because they have the fewest calories.
3 = Omit the sour cream and chocolate cake because they are high in calories and low in nutrients.
4 = Skip dinner because the food on the menu is too tempting.

(43) Given the menu above, what would be best to change for the 6-year-old boy?

1 = Have fried chicken and milk only because of protein needs of the growing child.
2 = Include all foods but serve small portions.
3 = Omit broccoli because most children do not like vegetables.
4 = Omit chocolate cake because a young child should not eat rich foods.

(44) Why are nitrites used in ham and bacon?

1 = To add flavor and color and prevent bacterial growth
2 = To improve the vitamin content
3 = To increase the tenderness of the product and reduce time required for cooking
4 = To speed up the curing process

(45) There has been heated debate about possible banning of Additive A in all food products. Although Additive A may be harmful to humans, several groups have protested the ban. Which of the following groups has a logical argument rather than a selfish interest?

1 = Drug companies that manufacture Additive A and claim they have found from their research that it is safe for humans
2 = Food companies that use Additive A in their products
3 = Medical authorities that argue that the alternative may be more harmful to some people than Additive A is
4 = Consumers that enjoy food products containing Additive A

(46) How important is it for people in the U.S. to use vitamin and mineral supplements?

1 = Essential for everyone because the food is processed highly
2 = Necessary to ensure that the diet contains enough of the B vitamins
3 = Not necessary if the diet is planned very well
4 = Of little use because synthetic vitamins are not effective

(47) Why are fast-food resteaurants often cheaper places to eat than other restaurants?

1 = Their food is low in nutrients and calories.
2 = They have very few expenses.
3 = They provide few customer services.
4 = They usually are located in low-rent areas.

Use the following situation to answer Questions 48 and 49:

You are invited to a Mexican potluck dinner. The only cookbook you have has only two recipes for Mexican dishes, and you do not have all the ingredients for either of them. You decide to substitute some ingredients in one of the dishes, but it does not turn out well.

(48) Given the situation above, which of these would be the most logical conclusion about the use of resources in this situation?

1 = Buying a frozen Mexican dish would have required the same resources as trying to prepare one.
2 = It would have been better to invest less time in deciding what to do.
3 = Resources were used as effectively as possible.
4 = You could have gotten more satisfaction if you had spent more money to buy the right ingredients.

(49) Given the situation above, which of these would be the most appropriate thing to do if you are invited to another Mexican potluck dinner?

1 = Consider more choices before deciding on a dish to take.
2 = Decide not to go to the party.
3 = Make the dish the same way as before.
4 = Make the same dish again but make different substitutions.

(50) What foods are needed by a 3-month-old infant?

1 = Breast milk or formula only
2 = Breast milk or formula and enriched cereal
3 = Enriched cereal, pureed vegetables, orange juice, and milk
4 = Some foods from each of the Four Food Groups

Use the following package label to answer Questions 51 and 52:

NUTRITION INFORMATION PER SERVING

	REGULAR FLAVOR (Product A)		CINNAMON & SPICE (Product B)		ARTIFICIAL MAPLE & BROWN SUGAR (Product C)		APPLES & CINNAMON (Product D)	
SERVING SIZE (1 PACKET)	1 OZ.		1-5/8 OZ.		1-1/2 OZ.		1-1/4 OZ.	
SERVINGS PER CONTAINER	2		2		2		2	
	PER 1 OZ. CEREAL	PER 1 OZ. CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1⅝ OZ. CEREAL	PER 1⅝ OZ. CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1½ OZ. CEREAL	PER 1½ OZ. CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK	PER 1¼-OZ. CEREAL	PER 1¼ OZ. CEREAL AND ½ CUP VITAMIN D FORTIFIED WHOLE MILK
CALORIES	110	190	180	250	160	240	140	220
PROTEIN	4 g	9 g	5 g	3 g	3 g	9 g	4 g	3 g
CARBOHYDRATE	18 g	24 g	35 g	41 g	32 g	38 g	25 g	32 g
FAT	2 g	7 g	2 g	6 g	2 g	6 g	2 g	5 g
PERCENTAGE OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA)								
PROTEIN	6%	15%	6%	20%	5%	15%	4%	15%
VITAMIN A	20%	20%	20%	20%	20%	20%	20%	20%
VITAMIN C	*	*	*	*	*	*	*	*
THIAMINE	20%	20%	20%	20%	20%	20%	20%	20%
RIBOFLAVIN	10%	20%	10%	20%	10%	20%	10%	20%
NIACIN	15%	15%	15%	15%	15%	15%	15%	15%
CALCIUM	10%	20%	10%	20%	10%	20%	10%	20%
IRON	20%	20%	20%	20%	20%	20%	20%	20%
VITAMIN D	*	10%	*	10%	*	10%	*	10%
VITAMIN B_6	20%	20%	20%	20%	20%	20%	20%	20%
FOLIC ACID	20%	20%	20%	20%	20%	20%	20%	20%
PHOSPHORUS	6%	15%	6%	15%	6%	15%	6%	15%

*CONTAINS LESS THAN 2% OF THE U.S. RDA FOR THIS NUTRIENT.
A SERVING CONTAINS ABOUT 0.3 g OF FIBER.

REGULAR FLAVOR INGREDIENTS. SPECIALLY PROCESSED ROLLED OATS. SALT. CALCIUM CARBONATE (A SOURCE OF CALCIUM). VEGETABLE GUM. CARAMEL FLAVOR. VITAMIN A PALMITATE. REDUCED IRON. NIACINAMIDE (ONE OF THE B VITAMINS). PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS). THIAMINE MONONITRATE. RIBOFLAVIN. FOLIC ACID.

CINNAMON & SPICE INGREDIENTS. SPECIALLY PROCESSED ROLLED OATS. SUGAR. SALT. CALCIUM CARBONATE (A SOURCE OF CALCIUM). VEGETABLE GUM. CINNAMON. NATURAL SPICE FLAVORING. CARAMEL FLAVOR. VITAMIN A PALMITATE. REDUCED IRON. NIACINAMIDE (ONE OF THE B VITAMINS). PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS). THIAMINE MONONITRATE. RIBOFLAVIN. FOLIC ACID

ARTIFICIAL MAPLE & BROWN SUGAR INGREDIENTS. SPECIALLY PROCESSED ROLLED OATS. SUGAR. ARTIFICIAL FLAVORS. SALT. CALCIUM CARBONATE (A SOURCE OF CALCIUM). VEGETABLE GUM. VITAMIN A PALMITATE. REDUCED IRON. NIACINAMIDE (ONE OF THE B VITAMINS). PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS). THIAMINE MONONITRATE. RIBOFLAVIN. FOLIC ACID

APPLES & CINNAMON AND ARTIFICIAL APPLE FLAVOR INGREDIENTS. SPECIALLY PROCESSED ROLLED OATS. SUGAR. DEHYDRATED APPLE FLAKES. SALT. CALCIUM CARBONATE (A SOURCE OF CALCIUM). VEGETABLE GUM. CINNAMON. ARTIFICIAL FLAVOR. VITAMIN A PALMITATE. REDUCED IRON. NIACINAMIDE (ONE OF THE B VITAMINS). PYRIDOXINE HYDROCHLORIDE (ONE OF THE B VITAMINS). THIAMINE MONONITRATE. RIBOFLAVIN. FOLIC ACID.

(51) Which of the following conclusions about the products is most accurate to reach from the information on the package label given above?

1 = All four products are good sources of vitamin D.
2 = All four products provide the U.S. RDA for vitamin C.
3 = Product A is better than Products B, C, and D for a person on a weight-reduction diet.
4 = Product A is better than Products B, C, and D in protein content.

(52) Which of the following conclusions about the ingredients of these products is most accurate to reach from the information on the package label given above?

1 = All four products have more oats than any other ingredient.
2 = No artificial preservatives, flavors, or colors have been used.
3 = The cereals are 40% sugar.
4 = The products naturally contain many of the B vitamins.

(53) If people in some countries do not have enough protein and calories in their diets, which of these would be the most effective way for our government to help them solve this problem?

1 = Offer incentives to farmers who will sell food to these countries at reduced prices.
2 = Offer to sell meat grown in the U.S. to these countries.
3 = Send scientists to these countries to help them improve their own food production.
4 = Ship vitamins to these countries to help them grow more grains.

(54) Which of the following diseases always can be prevented by a well-balanced diet?

1 = Cancer
2 = Common cold
3 = Heart disease
4 = Scurvy

(55) What is the main reason some people are willing to buy food at health food stores even though it is more expensive than food at supermarkets?

1 = They believe the food is more nutritious.
2 = They do not know about supermarket specials.
3 = They like the way the foods are displayed.
4 = They want to get food which will not spoil as quickly.

(56) How are fresh home-grown vegetables better than canned or frozen products?

1 = In length of time they can be stored
2 = In preparation and cooking time
3 = In taste and nutrient quality
4 = In variety of choices available

(57) Why might two foods and nutrition textbooks have different information on adequacy of nutrient intake of children and teenagers?

1 = The author of one book had more recent information on food habits of children and teenagers.
2 = The author of one book liked children and teenagers better.
3 = The author of one book was known better.
4 = The author of one book was paid more for writing the book.

(58) In completely vegetarian diets, which of the following nutrients always will be in short supply?

1 = Carbohydrate
2 = Protein
3 = Vitamin A
4 = Vitamin B_{12}

(59) What is the relationship between people's health and use of pesticides to increase food production?

1 = People's health is not related to use of pesticides.
2 = Pesticides are dangerous only to the people who breathe them when they are used.
3 = Some pesticides can cause foods to be dangerous for people to eat.
4 = Use of pesticides always is necessary to produce foods with adequate nutrients.

(60) Which of the following methods of food preservation will keep the most vitamin C in strawberries?

1 = Commercial canning
2 = Home freezing
3 = Making preserves
4 = Sun drying

(61) Which of the following sources probably would provide the most complete and accurate information about nutrients in foods?

1 = Food lobbies
2 = Local grocery stores
3 = U.S. Department of Agriculture
4 = Vitamin companies

(62) How nearly will a balanced and varied American diet of 2000 calories daily meet the iron needs of a 16-year-old girl?

1 = It almost always will fulfill her needs.
2 = It probably will not meet her needs unless liver and iron-fortified cereals are included often.
3 = It usually will exceed the Recommended Dietary Allowance (RDA).
4 = It will fulfill the Recommended Dietary Allowance (RDA) only if the diet includes a quart of milk daily.

SECTION IV

Directions: *(1) Mark your gender (sex) and grade level in the boxes indicated on your answer sheet.*

(2) Answer the following question in the space below:

What changes, if any, would you like to make in the food service program at your school?

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

THE UNIVERSITY OF TENNESSEE
College of Education - Bureau of Educational Research and Service
KNOXVILLE, TENNESSEE 37916

NUTRITION EDUCATION PROJECTS

HOME ECONOMICS BUILDING

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Sincerely,

Trudy W. Banta

Trudy W. Banta
NET Evaluation Director

SECTION I

Directions: For each item in this section (Questions 1-17), mark the circle on your answer sheet which indicates how you really feel about the statement, using the following scale:

1 = Strongly disagree
2 = Mildly disagree
3 = Undecided
4 = Mildly agree
5 = Strongly agree

(1) I like the quality and variety of food and the way it is served in the food service program at my school.

(2) The food in the cafeteria at school does not look very good.

(3) The food in the school cafeteria costs too much.

(4) It is more fun to eat away from school than to eat in the cafeteria.

(5) The cafeteria at my school is not a nice place to eat.

(6) The line in the cafeteria at my school is usually too long.

(7) I like to help decide what foods will be fixed for lunch at my school.

(8) I would rather have Coke than milk with a meal.

(9) I like to find out about the backgrounds of people who give advice about food and nutrition.

(10) I would rather take vitamin pills than learn to eat new foods.

(11) I like to eat a variety of foods each day.

(12) I would rather skip a meal than to cook it myself.

(13) I like to eat low-cost foods as well as high-cost ones.

(14) It bothers me to eat foods I have not tried before.

(15) I like to know about foods that are good for me.

(16) I like to think about the nutrients in foods when I am deciding what to eat.

(17) I like to think about how the way I eat affects other people.

SECTION II

Directions: For each item in this section (Questions 18-37), mark the circle on your answer sheet which indicates how frequently you engage in the behavior described in that statement, using the following scale:

1 = Never
2 = Seldom
3 = Sometimes
4 = Usually
5 = Always

(18) I eat the plate lunch served in the cafeteria at my school.

(19) I eat foods from the fast food line in the cafeteria at my school.

(20) I eat foods from the salad bar in the cafeteria at my school.

(21) I buy the foods I eat for lunch from the Coke and candy machines at my school.

(22) I bring my lunch and eat at school.

(23) I eat my lunch at home.

(24) I eat lunch at a store or restaurant away from my school.

(25) Students at my school participate in a Youth Advisory Council (YAC) or other student organization that helps plan school lunches.

(26) I help decide what foods will be served for lunch at my school.

(27) I learn at school about foods that are good for me.

(28) I use a daily food guide to help choose the foods I eat.

(29) I prepare meals using different cooking methods.

(30) I follow good safety rules when I store and handle food.

(31) I think about my nutrient and caloric needs when I decide what to eat.

(32) When I eat at a restaurant, I try to select a balanced meal.

(33) I taste familiar foods when they are prepared in new ways.

(34) I skip meals to cut down on calories.

(35) I eat several kinds of fruits and vegetables each day.

(36) I try to make mealtime pleasant for the people with whom I eat.

(37) I use different ways to solve my food and nutrition problems.

SECTION III

Directions: *For each item in this section (Questions 38-62), mark the circle on your answer sheet which corresponds to the best (most correct) of the four response choices.*

(38) If a friend tells you about a new weight-loss diet, which of these is the best way to decide if it is good?

1 = Ask your doctor about the diet.
2 = Find out how many people have used the diet.
3 = See how much weight your friend has lost on the diet.
4 = Try the diet for a week to see how you feel.

(39) Which of the following factors is least important in determining your nutrient and caloric needs?

1 = Age
2 = Amount of exercise
3 = Gender (sex)
4 = Personal beliefs

(40) Which of these potatoes would be crispiest?

1 = Baked potato
2 = Fried potato
3 = Mashed potato
4 = Steamed potato

(41) In which of these ways that green pepper might be fixed would it provide the most vitamin C?

1 = Baked
2 = Broiled
3 = Fried
4 = Raw

(42) Which of the following people probably would be the most helpful in planning a low-cost menu for a party?

1 = Food chemist
2 = Home economics teacher
3 = School business manager
4 = Waitress

(43) Which of the following health conditions would be most likely to occur in teenagers who do not get enough iron in their diets?

1 = Acne
2 = Anemia
3 = Diabetes
4 = Obesity

(44) What is the most likely reason that some young people do not eat many kinds of vegetables?

1 = Their families cannot afford many kinds.
2 = They cannot get many kinds in the grocery store.
3 = They do not know how to cook many kinds.
4 = They have not learned to like many kinds.

(45) Which of the following foods would be possible to prepare in 20 minutes without use of a microwave oven?

1 = Hamburgers
2 = Homemade vegetable-beef soup
3 = Pork chops
4 = Roast beef

(46) If one of your responsibilities at home is fixing breakfast for your family and you burn the toast almost every morning, which of these would be the best thing to do?

1 = Ask to trade chores with another family member.
2 = Figure out what you have been doing wrong and try to correct it.
3 = Keep serving the burned toast and hope your family will learn to like it.
4 = Make biscuits rather than toast for breakfast.

(47) Which of the following nutrients is needed for making red blood cells?

1 = Calcium
2 = Iron
3 = Vitamin A
4 = Vitamin D

(48) What nutritional advantage does an expensive piece of steak have compared to a cheaper piece?

1 = It probably has less fat than the cheaper piece.
2 = It probably has more protein than the cheaper piece.
3 = It probably has more vitamins and minerals than the cheaper piece.
4 = It probably has no nutritional advantage over the cheaper piece.

(49) Which of the following foods is the main ingredient used in the manufacture of imitation bacon?

1 = Beef
2 = Corn
3 = Milk
4 = Soybeans

(50) Which of these problems would food and nutrition information be least likely to help solve?

1 = Frequent colds and minor illnesses
2 = Midmorning energy slumps
3 = Overweight
4 = Poor social skills

(51) Which of these fast-food meals would provide the most nutrients?

1 = Chicken, mashed potatoes, and roll
2 = Hamburger, french fries, and Coke
3 = Hot dog and milk shake
4 = Sausage-cheese pizza and salad

(52) Which of these activities that could be done during a meal probably would help people enjoy the meal more?

1 = Eating as quickly as possible
2 = Playing with a pet
3 = Settling family problems
4 = Talking with others

(53) Which of the following foods contains the most iron?

2 = Hamburger
3 = Milk
4 = Pineapple

(54) If you read about ideal weight in a book on physical fitness, how can you tell

1 = By the background of the author of the book
2 = By the length of the book
3 = By the length of the chapter on ideal weight
4 = By the number of pictures in the book

(55) Which of the following family members needs the most protein?

1 = 10-year-old daughter who takes ballet
2 = 15-year-old son who plays football
3 = 35-year-old mother who is pregnant
4 = 37-year-old father who is a farmer

(56) Which of the following foods requires use of the fewest resources to produce?

1 = Cheese
2 = Ham
3 = Soybeans
4 = Steak

(57) Which of the following safety rules is important for frying foods?

1 = Cool the hot fat quickly with cold running water.
2 = Drop frozen foods quickly into the fat.
3 = Heat the fat quickly.
4 = Use moderate heat.

(58) If one student trying to find recipes for nutritious snacks looks through several cookbooks and another student asks several teachers for suggestions, what will they probably find?

1 = If the books are good ones, both students probably will come up with the same ideas.
2 = If the teachers all are good cooks, both students probably will come up with the same ideas.
3 = The two students may come up with either the same or different ideas.
4 = The two students probably will come up with very different ideas.

(59) Three students compared what they ate for breakfast. Karen had a hard-cooked egg, tomato juice, and cereal with milk. Bill had a hamburger and a banana milkshake. Pat had toast and orange juice. Who had nutritionally balanced breakfast(s)?

1 = None of the students
2 = Only Pat
3 = Both Karen and Bill
4 = All the students

(60) Which of the following foods contains the most calories?

1 = 1 dinner roll
2 = 1 cup whole milk
3 = 4 ounces of steak
4 = 10 potato chips

[illegible] served in the school cafeteria, which of the following would be the best thing to do?

1 = Encourage all students to return their food uneaten as a protest.
2 = Hope that other people in the school will do something about the situation.
3 = Organize a group of students to talk to the cafeteria manager.
4 = Stop eating in the school lunch program.

(62) What is the relationship between self-image and physical appearance of teenagers?

1 = They are related for both girls and boys.
2 = They are related for boys but not for girls.
3 = They are related for girls but not for boys.
4 = They are not related for either girls or boys.

SECTION IV

Directions: *(1) Mark your gender (sex) and grade level in the boxes indicated on your answer sheet.*

(2) Answer the following question in the space below:

What changes, if any, would you like to make in the food service program at your school?

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

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NUTRITION EDUCATION PROJECTS

HOME ECONOMICS BUILDING

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Sincerely,

Trudy W. Banta

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NET Evaluation Director

SECTION I

Directions: For each item in this section (Questions 1-13), mark the circle on your answer sheet which indicates how *__you really feel__* *about that idea. Use the following scale:*

1 = ☹ *I do not like it at all.*

2 = 🙁 *I do not like it very much.*

3 = 🙂 *I like it a little bit.*

4 = ☺ *I like it a lot.*

(1) How do you feel about the food that is fixed for lunch at your school?

(2) How do you feel about learning about foods that are good for you?

(3) How do you feel about helping decide what food you will have for lunch at your school?

(4) How do you feel about eating vegetables and fruits?

(5) How do you feel about trying to eat foods served in different ways?

(6) How do you feel about taking the advice of people who advertise foods on TV?

(7) How do you feel when you think about some people not having enough to eat?

(8) How do you feel about having Coke rather than milk with a meal?

(9) How do you feel about working with other people to find the answers to questions about food?

(10) How do you feel about tasting new foods from other countries?

(11) How do you feel about eating foods from different food groups?

(12) How do you feel about eating only foods produced near where you live?

(13) How do you feel about drinking a lot of water?

SECTION II

Directions: For each item in this section (Questions 14-27), mark the circle on your answer sheet which indicates how often you do what is described, using the following scale:

1 = Never
2 = Sometimes
3 = Often

(14) How often do you eat the lunch fixed at your school?

(15) How often do you help someone at your school decide what will be served for lunch at your school?

(16) How often do you learn from your teacher about foods that are good for you?

(17) How often do you learn from someone at home about foods that are good for you?

(18) How often do you eat foods that are fixed in new ways?

(19) How often do you buy foods you see advertised on TV?

(20) How often do you eat foods from other cultures?

(21) How often do you ask someone about the nutrients in the foods you eat?

(22) How often do you eat orange or yellow vegetables?

(23) How often do you try to find out why someone gives you advice on foods before you follow their suggestions?

(24) How often do you eat green vegetables?

(25) How often do you try to find out why certain foods are traditional in your family?

(26) How often do you drink milk or eat foods made from milk?

(27) How often do you work with someone to find the answer to a question about food?

SECTION III

Directions: For each item in this section (Questions 28-47), mark the circle on your answer sheet which corresponds to the best (most correct) of the four response choices.

(28) Why does the body need carbohydrates?

1 = To allow protein to be used for body building
2 = To help in weight loss
3 = To help the body conserve water
4 = To build muscles

(29) What is the main reason that people in Iowa do not eat as much seafood as the people in Florida?

1 = Fresh ocean fish are expensive because they have to be shipped long distances.
2 = Many people in Iowa catch their own fish in local lakes.
3 = Most people in Iowa do not like seafood.
4 = Polluted water in Iowa has caused a shortage of fish.

(30) How did the American Indians in the Southwest preserve most of their food?

1 = Canning
2 = Drying
3 = Freezing
4 = Pickling

(31) What is the main reason that companies sometimes put food in attractive packages?

1 = Attractive packages sell more of their products.
2 = Food companies like to help stores look nice.
3 = People like to use the containers after they empty them.
4 = The government requires food companies to package things in a certain way.

(32) In which category of foods does a potato belong?

1 = Grains
2 = Legumes and nuts
3 = Meat, fish, poultry, and eggs
4 = Vegetables and fruits

(33) What is the major reason many families in the U.S. eat more TV dinners than they used to?

1 = Cookbooks are too expensive for most families.
2 = Home-cooked meals usually are less nutritious than TV dinners.
3 = TV dinners always taste better than home-cooked meals.
4 = TV dinners take less time to fix than home-prepared foods.

(34) What is a major reason that children choose to eat candy, potato chips, and Cokes even though they know these foods are not the most nutritious snacks?

1 = Their parents tell them to eat these foods.
2 = These foods always are cheaper than more nutritious snacks.
3 = These foods are easier to digest.
4 = They like to eat the same foods their friends do.

(35) Why do some diseases occur only in some parts of the world?

1 = People in some areas do not have food that contains all the nutrients they need.
2 = People in some parts of the world do not get enough sleep.
3 = People in some parts of the world do not take enough vitamin pills.
4 = People who live in cold climates get more diseases.

(36) How would people probably react if green food coloring were added to their mashed potatoes?

1 = Everyone would like them just as well because the taste would be the same.
2 = Many people would like them better because they would be prettier.
3 = Many people would not like them because the color is not what they are used to.
4 = Most people would like them if butter were added.

(37) Why are corn tortillas often eaten in Mexico?

1 = Corn tortillas are more nutritious than flour tortillas.
2 = It is easier to grind corn than wheat.
3 = Not many people are allergic to corn.
4 = There is more corn than wheat in Mexico.

(38) What is the most likely reason that your parents might tell you to eat three meals a day and your friend's parents tell her to eat only when she is hungry?

1 = Different people have different ideas about ways to keep healthy.
2 = Her parents do not have a dining room.
3 = Her parents give her vitamin pills.
4 = Your parents do not know as much about nutrition as her parents.

(39) Why is it especially important for children to get a lot of protein and minerals?

1 = They are growing rapidly.
2 = They have skin problems.
3 = They no longer take naps.
4 = They often get cavities in their teeth.

(40) Why do Chinese children use chopsticks instead of knives and forks?

1 = Chopsticks are easier for children to use.
2 = Chopsticks are more fun to use.
3 = Chopsticks are safer for young children.
4 = Chopsticks are traditional in China.

(41) One family bought a big box of a new dry cereal because it had a prize in the box, but no one liked the cereal. What should they do next time they want to try a new cereal?

1 = Buy a cereal that looks like one they have tried before.
2 = Buy a cereal they can cook.
3 = Buy a small box of the new cereal.
4 = Do not buy cereal with a prize in the box.

(42) What do carbohydrates, fats, and proteins all do?

1 = Help regulate body temperature
2 = Prevent cavities
3 = Provide for the growth of muscles
4 = Provide energy for the body

(43) What kind of food would a family with Italian background probably eat?

1 = Almost all fried foods
2 = Many dishes made with macaroni and spaghetti
3 = Mostly high-protein foods
4 = Very mild-tasting food combinations

(44) Which of these foods contains the most protein?

1 = Baked sweet potato
2 = Fresh tomato
3 = Roast turkey
4 = Steamed rice

(45) What is a main reason many people eat a lot of their meals in restaurants?

1 = Eating out always costs less than eating at home.
2 = Restaurant food usually is more nutritious.
3 = They do not like to spend their time cooking.
4 = They like to meet new people.

(46) Why do people in Southeast Asia use rice instead of wheat as a basic food?

1 = Rice is a better source of carbohydrate.
2 = Rice is better for Asian people.
3 = Rice goes better with Chinese foods.
4 = Rice grows better in their climate.

(47) If you are planning what to serve at a party, which of these things do you need to do first?

1 = Get recipes for your favorite foods.
2 = Get several ideas about what to serve.
3 = Go to the grocery store.
4 = Prepare the foods that can be fixed early.

SECTION IV

Directions: (1) *Mark whether you are a male (boy) or female (girl) in the box marked "Sex" on your answer sheet.*

(2) *Mark what grade you are in now in the box marked "Grade" on your answer sheet.*

(3) *Answer the following question in the space below:*

What changes, if any, would you like to make in the food service program at your school?

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Trudy W. Banta

Trudy W. Banta
NET Evaluation Director

SECTION I

__Directions:__ For each item in this section (Questions 1-8), mark an "X" through the face at the left of the question which shows how __you really feel__ about that idea. The faces have the following meanings:

☹ *1 = I do __not__ like it.*

😐 *2 = I do not like it __or__ dislike it.*

☺ *3 = I like it.*

1 = ☹ 2 = 😐 3 = ☺ (1) How do you feel about the food that is fixed for lunch at your school?

1 = ☹ 2 = 😐 3 = ☺ (2) How do you feel about learning about foods that are good for you?

1 = ☹ 2 = 😐 3 = ☺ (3) How do you feel about helping decide what food you will have for lunch at your school?

1 = ☹ 2 = 😐 3 = ☺ (4) How do you feel about eating green vegetables?

1 = ☹ 2 = 😐 3 = ☺ (5) How do you feel about finding out about the kinds of plants and animals from which you get your food?

1 = ☹ 2 = 😐 3 = ☺ (6) How do you feel about eating different kinds of food each day?

1 = ☹ 2 = 😐 3 = ☺ (7) How do you feel about loud talking while you are eating?

1 = ☹ 2 = 😐 3 = ☺ (8) How do you feel about having Coke rather than milk with a meal?

SECTION II

Directions: For each item in this section (Questions 9-17), draw a circle around the word at the left of the question which tells what you really do. Use the following responses:

1 = NO (You usually do not do this.)

2 = YES (You sometimes do this.)

1 = NO 2 = YES (9) Do you eat the lunch fixed at your school?

1 = NO 2 = YES (10) Do you help someone at your school decide what will be served for lunch?

1 = NO 2 = YES (11) Do you learn from your teacher about foods that are good for you?

1 = NO 2 = YES (12) Do you learn from someone at home about foods that are good for you?

1 = NO 2 = YES (13) Do you sometimes try a new food you have not eaten before?

1 = NO 2 = YES (14) Do you ask your parents about whether you should eat the foods you hear about on TV?

1 = NO 2 = YES (15) Do you eat only the foods that you like most?

1 = NO 2 = YES (16) Do you eat some foods now that you did not like when you were younger?

1 = NO 2 = YES (17) Do you ever fix a meal for yourself?

SECTION III

Directions: For each item in this section (Questions 18-37), draw a circle around the number of the best (most correct) answer to the question.

(18) Which of these foods is made from wheat?

1 = Cheese
2 = Hamburger bun
3 = Peanut butter
4 = Jello

(19) What can we always say about foods that are high in calories?

1 = They cost a lot.
2 = They give us a lot of energy.
3 = They should be eaten with a fork.
4 = They taste good.

(20) Why might a teacher and a grocery store clerk tell you different things about what to eat?

1 = The grocery store clerk probably is more interested in your health.
2 = The grocery store clerk probably knows more about what children need.
3 = The teacher probably knows more about nutrition.
4 = The teacher probably makes more money.

(21) Which of these foods should be cooked before it is safe to eat?

1 = Cabbage
2 = Egg
3 = Green beans
4 = Spinach

(22) What should you do if you are hungry an hour before supper and have a choice of ice cream and cake or an apple?

1 = It does not matter which you eat because both are good.
2 = You should eat both because they contain different nutrients.
3 = You should eat the apple because the ice cream and cake will make you too full for supper.
4 = You should eat the ice cream and cake because you will be healthier.

(23) How much alike are the foods that healthy people eat?

1 = All healthy people eat meats.
2 = All healthy people eat the same foods.
3 = Different healthy people eat different foods.
4 = Some healthy people eat only breads.

(24) What foods are people most likely to enjoy eating?

1 = Foods from other countries
2 = Foods that do not cost much
3 = Foods they have eaten before
4 = Foods they have tried once

(25) From what animals do we get beef?

1 = Cattle
2 = Chickens
3 = Pigs
4 = Sheep

(26) Why do some people eat foods they did not like when they were younger?

1 = The foods do not cost as much now.
2 = They eat more meals each day.
3 = They have bigger stomachs now.
4 = Their ideas about food have changed.

(27) Which of these is the best reason for eating different kinds of food?

1 = Different foods are in the grocery store.
2 = Eating different foods costs less.
3 = Eating different foods helps make you healthy.
4 = People in other countries eat different foods.

(28) Which of these mealtime activities would help people enjoy their food the most?

1 = Calling their friends on the phone
2 = Fighting over their food
3 = Playing with their pets
4 = Talking with others at the table

(29) Which of the following foods provides energy but not many nutrients?

1 = Carrot sticks
2 = Celery with cheese
3 = Hamburger
4 = Kool-Aid

(30) If you spill your glass of milk during supper, what would be the best thing to do the next night at supper?

1 = Drink water instead of milk.
2 = Eat ice cream instead of drinking milk.
3 = Eat supper by yourself.
4 = Use a glass that will not turn over as easily.

(31) When do you need to eat the most food?

1 = When the weather is hot

2 = When you are going on a car trip

3 = When you are growing a lot

4 = When you are learning to read

(32) What is the difference in taste between fresh apples and apples in pie?

1 = Apples in pie taste saltier.

2 = Apples in pie taste sweeter.

3 = Apples in pie taste more sour.

4 = Apples in pie taste the same as fresh apples.

(33) In fixing a breakfast of corn flakes, milk, and orange juice, what should you do last?

1 = Get out the dishes.

2 = Pour the corn flakes.

3 = Pour the orange juice.

4 = Put milk on the corn flakes.

(34) What would you need to have to plan a meal?

1 = Courage and strength

2 = Dishes and food

3 = Tablecloth and napkins

4 = Time and skill

(35) Which of these things would be best to tell a friend about how to be healthy?

1 = Eat foods that cost a lot.

2 = Eat the foods you see on TV.

3 = Eat many different kinds of food.

4 = Eat what your friends eat.

(36) If trucks and trains quit working, what would happen to our food?

1 = People still could get the same foods.

2 = People would drive to other states to get their food.

3 = People would grow all the foods they are used to eating.

4 = People would not be able to get as many kinds of foods in the grocery store.

(37) From which of these animals do we get ham?

1 = Cattle

2 = Chickens

3 = Pigs

4 = Sheep

SECTION IV

Directions: *Circle the correct answer for each question below.*

(cc 38) (1A) What is your sex?

1 = Boy
2 = Girl

(cc 39) (2A) What grade [illegible] you in?

2 = Second
3 = Third

Directions: *Answer the following question in the space below.*

(3A) What changes, if any, would you like to make in the food service program at your school?

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

(Do not write below this line.)

(cc 71-73) ____________________ Code

(cc 74-77) ____________________ ID

SECTION I

Directions: *For each item in this section (Questions 1-8), mark an "X" through the face on the answer sheet which shows how you really feel about that idea. The faces are as follows:*

☹ *1 = Sad (I do not like it.)*

☺ *2 = Happy (I like it.)*

(1) How do you feel about the food that is fixed for lunch at your school?

1 = Sad (I do not like it.)
2 = Happy (I like it.)

(2) How do you feel about learning about foods that are good for you?

1 = Sad (I do not like it.)
2 = Happy (I like it.)

(3) How do you feel about helping decide what food you will have for lunch at your school?

1 = Sad (I do not like it.)
2 = Happy (I like it.)

(4) How do you feel about eating many different kinds of foods?

1 = Sad (I do not like it.)
2 = Happy (I like it.)

(5) How do you feel about eating vegetables?

1 = Sad (I do not like it.)
2 = Happy (I like it.)

(6) How do you feel about having Coke rather than milk with a meal?

1 = Sad (I do not like it.)
2 = Happy (I like it.)

(7) How do you feel about fixing snacks for yourself and your friends?

1 = Sad (I do not like it.)
2 = Happy (I like it.)

(8) How do you feel about eating foods that keep you healthy?

1 = Sad (I do not like it.)
2 = Happy (I like it.)

SECTION II

__Directions:__ For each item in this section (Questions 9-17), mark an "X" through the symbol on the answer sheet which shows what you really do. They symbols are as follows:

1 = Square = NO (I usually do __not__ do this.)
2 = Star = YES (I sometimes do this.)

(9) Do you eat the lunch fixed at your school?

1 = No (Square)
2 = Yes (Star)

(10) Do you help someone at your school decide what will be served for lunch?

1 = No (Square)
2 = Yes (Star)

(11) Do you learn from your teacher about foods that are good for you?

1 = No (Square)
2 = Yes (Star)

(12) Do you learn from someone at home about foods that are good for you?

1 = No (Square)
2 = Yes (Star)

(13) Do you ask your parents to get foods that you hear about on TV?

1 = No (Square)
2 = Yes (Star)

(14) Do you usually wash your hands before you eat?

1 = No (Square)
2 = Yes (Star)

(15) Are there any foods you do not eat because of the way they look?

1 = No (Square)
2 = Yes (Star)

(16) Do you eat many different kinds of foods?

1 = No (Square)
2 = Yes (Star)

(17) Do you taste new foods before you decide whether or not you like them?

1 = No (Square)
2 = Yes (Star)

SECTION III

__Directions:__ For each item in this section (Questions 18-37), make an "X" through the symbol on the answer sheet which matches the symbol on the picture of the __best__ (most correct) answer to the question.

(18) Where do we get nutrients?

(circle) 1 = Air
(square) 2 = Exercise
(triangle) 3 = Food
(star) 4 = TV

(19) Where do we get the foods we eat?

(circle) 1 = From animals and plants
(square) 2 = From animals and water
(triangle) 3 = From plants and rocks
(star) 4 = From rocks and water

(20) How would a child probably feel who does __not__ eat breakfast?

(circle) 1 = Happy
(square) 2 = Lively
(triangle) 3 = Scared
(star) 4 = Tired

(21) Why would most people rather eat at a pretty table than a messy one?

(circle) 1 = The food will smell better.
(square) 2 = The food will cost less.
(triangle) 3 = They will enjoy the food more.
(star) 4 = They will grow more.

(22) Which of these snacks could be fixed without cooking?

(circle) 1 = Crackers and cheese
(square) 2 = Grilled cheese sandwich
(triangle) 3 = Pizza
(star) 4 = Tomato soup

(23) If you want to know what is the best kind of cereal, why would it be a good idea to ask several different people?

(circle) 1 = Different people have different ideas about food.
(square) 2 = Girls like cereal better than boys do.
(triangle) 3 = Most people do not eat cereal.
(star) 4 = Some people do not like to talk about food.

(24) Which one of these people would need the most food?

(circle) 1 = A baby
(square) 2 = A 6-year-old child
(triangle) 3 = A 10-year-old child
(star) 4 = An adult

(25) Which of these foods usually feels hot when you eat it?

(circle) 1 = Cottage cheese
(square) 2 = Jello salad
(triangle) 3 = Milk shake
(star) 4 = Vegetable soup

(26) What is the best place to keep cooked vegetables and meats?

(circle) 1 = In the cupboard
(square) 2 = In the oven
(triangle) 3 = In the refrigerator
(star) 4 = On the table

(27) If you already know how to make a peanut butter sandwich, which of these snacks would be the easiest to learn to make?

(circle) 1 = Cheese sandwich
(square) 2 = Milk shake
(triangle) 3 = Peanut butter cookies
(star) 4 = Pizza

(28) What is the best way to get all the nutrients you need every day?

(circle) 1 = Drink lots of milk.
(square) 2 = Eat different kinds of foods.
(triangle) 3 = Eat lots of meat.
(star) 4 = Take vitamin pills.

(29) Which of these snacks would take the longest to fix?

(circle) 1 = Apple
(square) 2 = Carrot
(triangle) 3 = Hamburger
(star) 4 = Milk

(30) Which of these foods do we get from an animal?

(circle) 1 = Cereal
(square) 2 = Egg
(triangle) 3 = Orange
(star) 4 = Peanut butter

(31) If you have a question about food, what would be the best way to answer it?

(circle) 1 = Ask someone else to help find the answer.
(square) 2 = Decide there is not an answer.
(triangle) 3 = Hope you will dream what the answer is.
(star) 4 = Make up an answer.

(32) Which of these things does a child need the most food to do?

(circle) 1 = Running
(square) 2 = Sitting
(triangle) 3 = Sleeping
(star) 4 = Watching TV

(33) Why do many people eat the same food every year on Thanksgiving Day?

(circle) 1 = It gives them a lot of energy.
(square) 2 = It is a family custom or habit.
(triangle) 3 = It is all that is in the grocery store.
(star) 4 = It is important to help them grow.

(34) Which of these snacks would be best to keep you healthy?

(circle) 1 = Chewing gum
(square) 2 = Doughnut
(triangle) 3 = Kool-Aid
(star) 4 = Orange

(35) Which of these people probably would know the most about what foods would keep you healthy?

(circle) 1 = A fire fighter
(square) 2 = A police officer
(triangle) 3 = A secretary
(star) 4 = A teacher

(36) What food do most children need every day?

(circle) 1 = Banana
(square) 2 = Candy bar
(triangle) 3 = Coke
(star) 4 = Milk

(37) What is the first thing you need to do before you eat dinner?

(circle) 1 = Pick up the fork.
(square) 2 = Say the blessing.
(triangle) 3 = Sit down at the table.
(star) 4 = Wash your hands.

SECTION IV

Directions: *Mark an "X" through the symbol which tells about you.*

(38) Are you a boy or a girl?

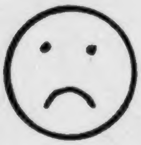
1 = Boy (Circle)
2 = Girl (Triangle)

(39) What grade are you in?

0 = K (Kindergarten)
1 = 1 (First grade)

SECTION I

(1)



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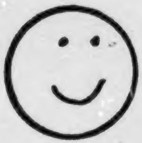
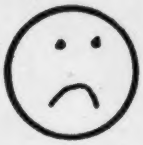


2 = Happy

(2)



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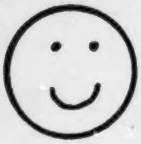
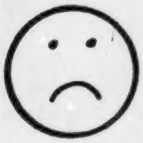


2 = Happy

(3)



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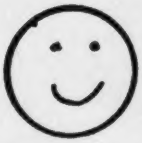
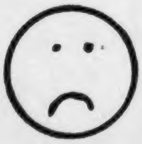


2 = Happy

(4)



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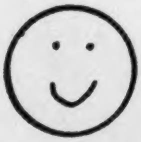

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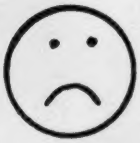
(5)



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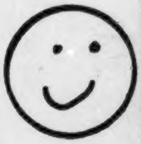
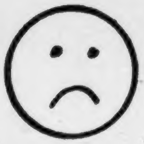


2 = Happy

(6)



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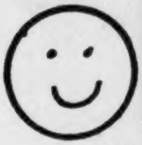
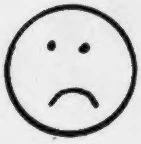


2 = Happy

(7)



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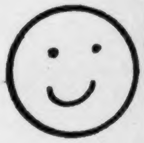
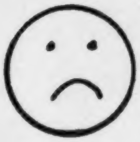


2 = Happy

(8)



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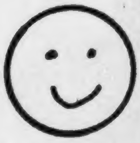


2 = Happy

SECTION II

(9) ☐ 1 = NO ✡ 2 = YES

(10) ☐ 1 = NO ✡ 2 = YES

(11) ☐ 1 = NO ✡ 2 = YES

(12) ☐ 1 = NO ✡ 2 = YES

(13) ☐ 1 = NO ✡ 2 = YES

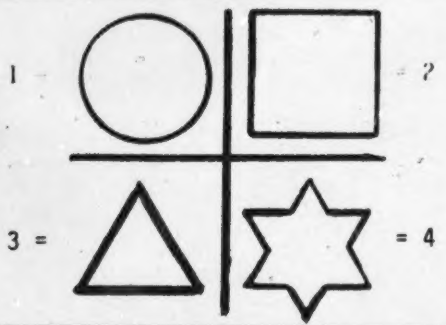
(14) ☐ 1 = NO ✡ 2 = YES

(15) ☐ 1 = NO ✡ 2 = YES

(16) ☐ 1 = NO ✡ 2 = YES

(17) ☐ 1 = NO ✡ 2 = YES

(18)



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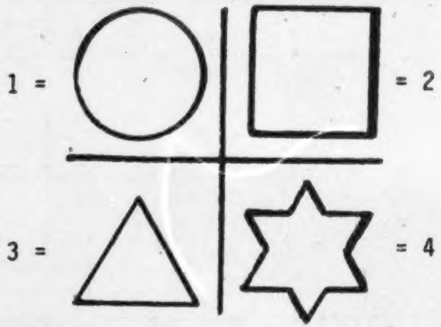

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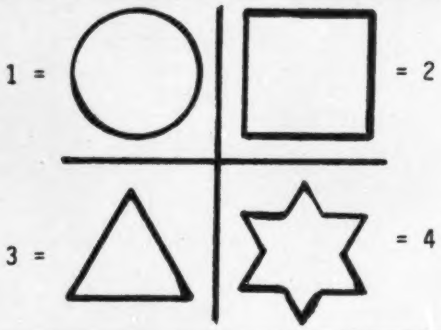

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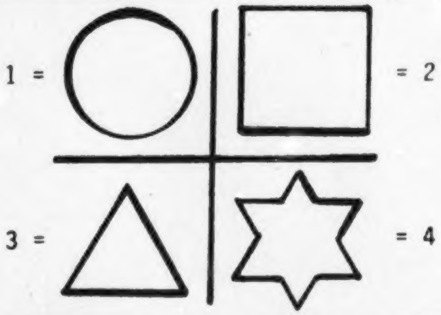

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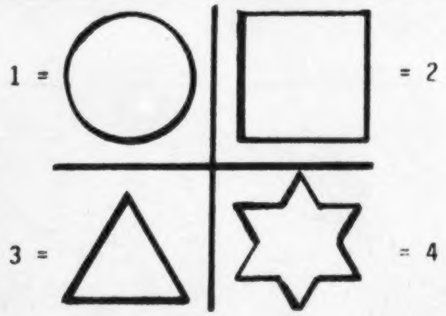

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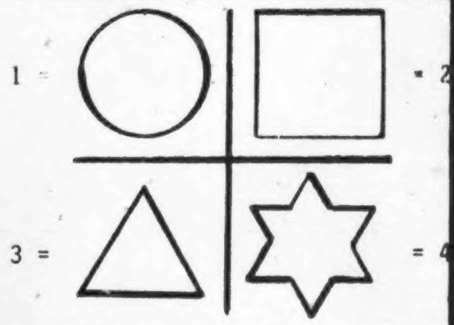

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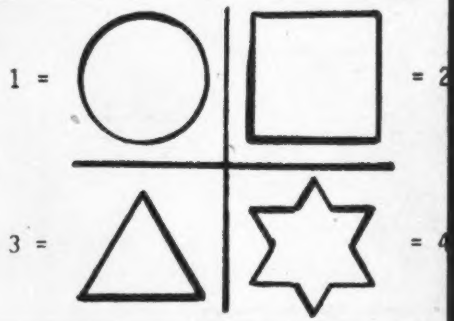

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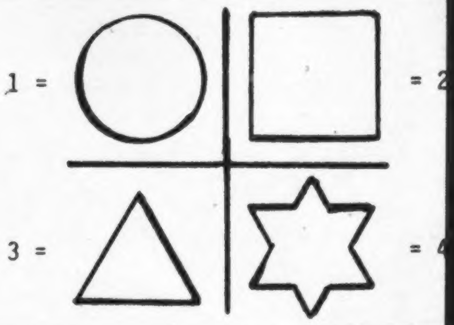

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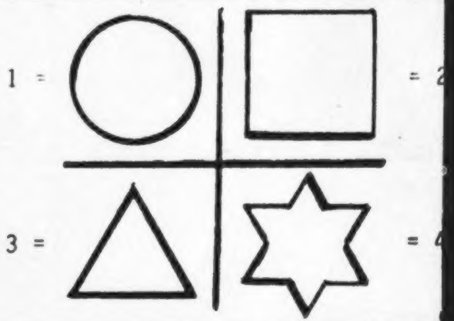

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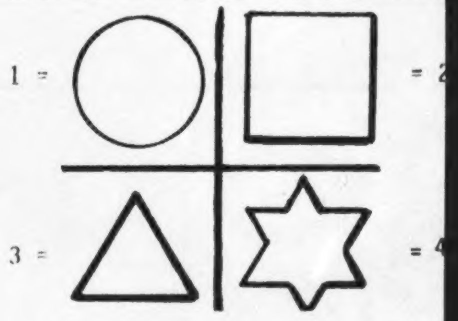

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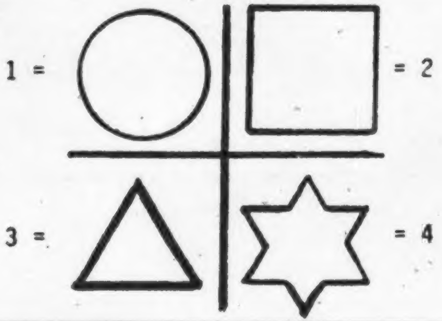

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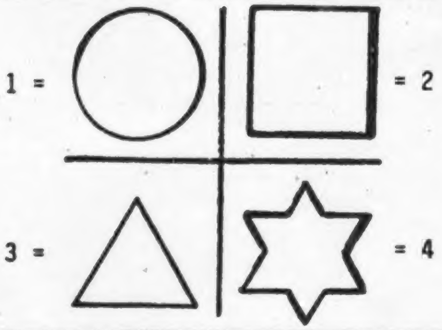

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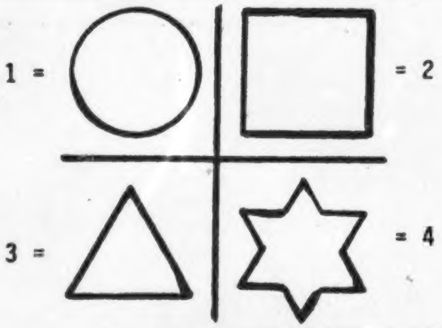

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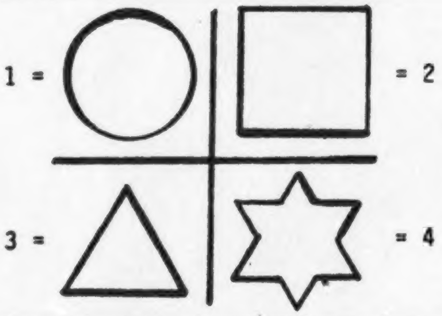

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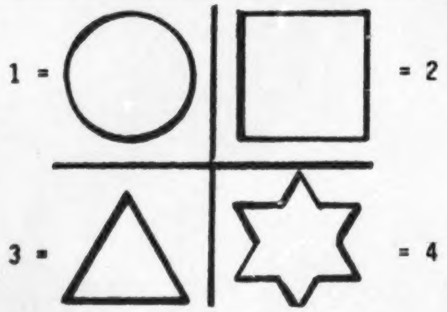

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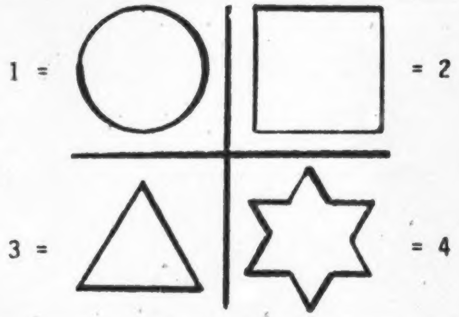

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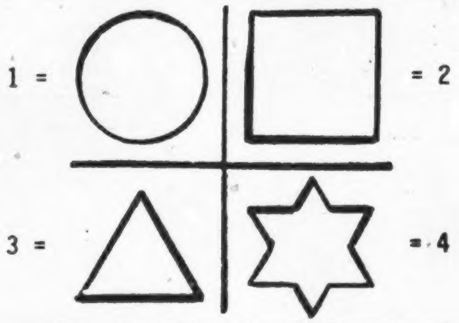

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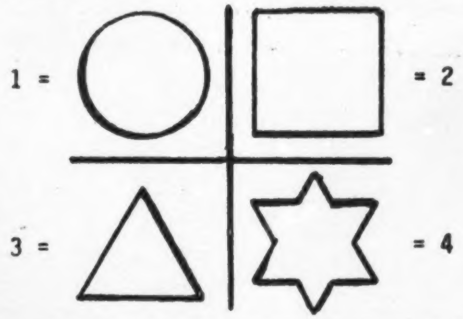

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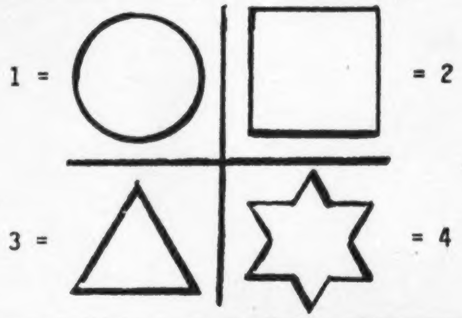

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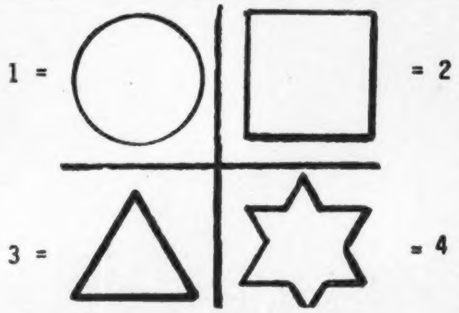

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(38)

1 = BOY

2 = GIRL

---

(39) K 1

0 = Kindergarten 1 = Grade 1

THANK YOU FOR YOUR HELP!

(cc 40-42) ____________________ Code

(cc 43-46) ____________________ ID

APPENDIX R

RELIABILITY INDICES FOR FINAL VERSIONS OF INSTRUMENTS FOR ASSESSING NUTRITION KNOWLEDGE, ATTITUDES AND PRACTICES

Reliability Indices for Final Versions of Instruments for Assessing Nutrition Knowledge, Attitudes and Practices

Instrument/Scale	Number of Respondents	Number of Items in Scale	Cronbach's Alpha (Standardized)
Student Groups			
Grades K-1			
Knowledge	743	20	.72
Attitudes	743	5	.53
Practices	743	5	.25
Grades 2-3			
Knowledge	787	20	.70
Attitudes	787	5	.42
Practices	787	5	.47
Grades 4-6			
Knowledge	1436	20	.79
Attitudes	1436	10	.55
Practices	1436	10	.60
Grades 7-9			
Knowledge	670	25	.76
Attitudes	670	10	.52
Practices	670	10	.70
Grades 10-12			
Knowledge	503	25	.73
Attitudes	503	10	.71
Practices	503	10	.80

Instrument/Scale	Number of Respondents	Number of Items in Scale	Cronbach's Alpha (Standardized)
	Adult Groups		
Parents			
Knowledge	1659	25	.82
Attitudes	1659	10	.80
Practices	1659	10	.90
Elementary school teachers			
Knowledge	197	30	.71
Attitudes	197	10	.87
Practices	197	10	.79
Secondary school teachers			
Knowledge	65	30	.88
Attitudes	65	10	.93
Practices	65	10	.85
Food service personnel			
Knowledge[a]	37	30	.91
Attitudes	147	10	.91
Practices	147	10	.85
Administrators[b]			
Attitudes	58	15	.96
Practices	58	10	.91

[a] Assessed for food service managers only.

[b] Assessment included attitudes and practices only.

Item Analyses for Knowledge Scale
on Final Versions of Instruments

Instrument	Number of participants	Number of Items in Scale	Average difficulty index	Average discrimination index
Student Groups				
Grades K-1	743	20	.44	.45
Grades 2-3	787	20	.41	.43
Grades 4-6	1436	20	.47	.54
Grades 7-9	670	25	.52	.42
Grades 10-12	503	25	.53	.43
Adult Groups[a]				
Parents	1659	25	.49	.48
Elementary school teachers	197	30	.36	.29
Secondary school teachers	65	30	.45	.45
Food service managers	37	30	.54	.56

[a] Knowledge was not assessed for administrators or food service workers.

APPENDIX S

SUMMARY OF SCORES ON ATTITUDE AND PRACTICES SCALES FOR ALL PARTICIPANTS IN BASELINE DATA COLLECTION

AND

SUMMARY OF SCORES ON ATTITUDE AND PRACTICES SCALES FOR ALL PARTICIPANTS IN BASELINE DATA COLLECTION

Summary of Scores on Knowledge Scales
for All Participants in Baseline Data Collection

Instrument/Scales	Number of Items in Scale	Scale Mean[a]	Scale Standard Deviation	Percentage of Correct Responses[b]	Cronbach's Alpha (Standardized)
Student Groups					
Grades K-1					
Goal I	6	2.90	1.34	48.4	.30
Goal II	4	2.28	1.11	57.0	.45
Goal III	6	4.20	1.46	70.0	.54
Goal IV	4	2.14	1.07	53.7	.20
Total	20	11.53	3.66	57.6	.72
Grades 2-3					
Goal I	5	3.30	1.27	66.0	.45
Goal II	5	2.53	1.33	50.6	.40
Goal III	6	3.60	1.33	60.1	.30
Goal IV	4	2.61	1.06	65.3	.45
Total	20	12.04	3.52	60.2	.70
Grades 4-6					
Goal I	6	3.41	1.67	56.9	.58
Goal II	5	2.82	1.37	56.4	.50
Goal III	3	1.45	.91	48.2	.20
Goal IV	6	3.13	1.57	52.1	.50
Total	20	10.81	4.34	54.0	.79
Grades 7-9					
Goal I	7	2.90	1.50	41.5	.36
Goal II	5	3.01	1.21	60.2	.45
Goal III	6	2.88	1.31	47.9	.34
Goal IV	7	3.88	1.77	55.5	.56
Total	25	12.67	4.46	50.7	.76
Grades 10-12					
Goal I	8	3.54	1.52	44.2	.30
Goal II	6	2.76	1.42	46.0	.44
Goal III	4	1.80	.99	44.9	.15
Goal IV	7	3.84	1.81	54.9	.59
Total	25	11.94	4.31	47.8	.73

Instrument/Scales	Number of Items in Scale	Scale Mean[a]	Scale Standard Deviation	Percentage of Correct Responses[b]	Cronbach's Alpha (Standardized)
Adult Groups[c]					
Parents					
Goal I	7	3.25	1.57	46.4	.47
Goal II	7	3.81	1.91	54.4	.67
Goal III	6	2.81	1.39	46.8	.41
Goal IV	5	3.14	1.22	62.8	.52
Total	25	13.01	4.91	52.0	.82
Elementary school teachers					
Goal I	11	6.60	1.63	60.0	.27
Goal II	7	4.82	1.52	68.8	.51
Goal III	6	3.49	1.15	58.1	.20
Goal IV	6	4.76	.96	79.3	.41
Total	30	19.66	3.85	65.6	.71
Secondary school teachers					
Goal I	10	5.46	2.31	54.6	.69
Goal II	7	4.85	1.85	69.2	.72
Goal III	7	3.23	1.32	46.2	.37
Goal IV	6	3.97	1.49	66.2	.55
Total	30	17.51	6.01	58.4	.68
Food service managers					
Goal I	10	4.62	2.29	46.2	.70
Goal II	7	3.97	2.17	56.8	.80
Goal III	7	3.78	1.92	54.1	.71
Goal IV	6	2.97	1.57	50.0	.64
Total	30	15.35	7.03	51.2	.91

[a] Average number of items answered correctly.

[b] Average percentage of items answered correctly.

[c] Knowledge was not assessed for food service workers or school administrators.

Summary of Scores on Attitude and Practices Scales
for All Participants in Baseline Data Collection

Instrument/Scales	Number of Items in Scale	Scale Mean[a]	Scale Standard Deviation	Average Item Mean[b]	Cronbach's Alpha (Standardized)
Student Groups					
Grades K-1[c]					
Attitudes	5	8.83	.98	1.77	.35
Practices	5	8.37	.95	1.67	.06
Grades 2-3[d]					
Attitudes	5	12.13	1.94	2.43	.33
Practices	5	8.41	1.16	1.68	.39
Grades 4-6[e]					
Attitudes	10	29.43	3.86	2.94	.48
Practices	10	20.75	2.85	2.07	.52
Grades 7-9[f]					
Attitudes	10	34.29	5.33	3.43	.46
Practices	10	29.30	6.12	2.93	.68
Grades 10-12[f]					
Attitudes	10	33.47	6.44	3.35	.68
Practices	10	22.21	6.42	2.22	.77

Instrument/Scales	Number of Items in Scale	Scale Mean[a]	Scale Standard Deviation	Average Item Mean[b]	Cronbach's Alpha (Standardized)
		Adult Groups[f]			
Parents					
Attitudes	10	17.89	5.24	1.79	.73
Practices	10	38.68	4.11	3.87	.69
Elementary school teachers					
Attitudes	10	41.26	6.25	4.13	.84
Practices	10	34.40	5.15	3.44	.75
Secondary school teachers					
Attitudes	10	40.79	7.04	4.08	.88
Practices	10	29.89	7.07	2.99	.82
Food service personnel					
Attitudes	10	43.67	4.34	4.37	.67
Practices	10	37.36	6.19	3.74	.77
Administrators					
Attitudes	15	59.15	7.61	3.94	.83
Practices	10	33.15	6.32	3.31	.82

[a] Average of summated rating scale totals, where a higher score represents more favorable attitudes or more appropriate practices.

[b] Average of summated rating scale item responses.

[c] Based on 2-point scales for both attitudes and practices.

[d] Based on 3-point scales for both attitudes and practices.

[e] Based on 4-point scales for both attitudes and practices.

[f] Based on 5-point scales for both attitudes and practices.